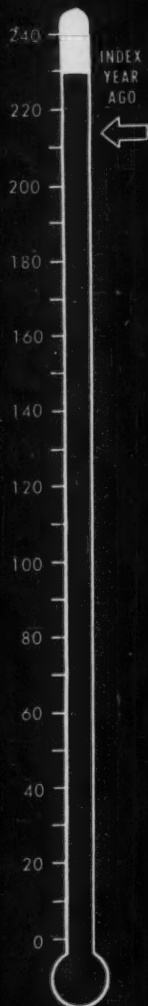


# BUSINESS WEEK

WHAT YOU  
CAN EXPECT FROM  
**The New  
Wage Policy**  
PAGE 19



United's W. A. Patterson—"You'd better stick close to those fellows..." (page 138)

A MCGRAW HILL PUBLICATION

JUNE 16, 1951

# Tell it to Kimberly-Clark

An idea exchange service for  
advertisers and buyers of printing

## Let your colors set the mood!

Too often, personal opinion enters into the selection of colors for an advertisement. Actually, there are basic psychological reactions to most colors which should be taken into consideration. Blue creates a feeling of coolness, freshness, cleanliness—and is the favorite color with men. Red rates first with women, and is the "exciting" color; browns and tans are warm, dignified, and frequently appetizing in the case of foods, while purple is often depressing. Light or bright yellows are cheerful, and black on yellow is the most legible of all combinations. If you choose colors carefully, they'll help achieve the desired mood in printed advertising—and you'll avoid many common mistakes seen every day.

*George W. Straub, Art Director,  
Outdoor Advertising, Inc.*



## I got off my printer's neck!

Recently I checked back over a 12-month period and found that almost every job we had given our printer had been a "rush." I also found that most of the mistakes and overtime charges were a result of his having to meet our hurry-up deadlines. So I tried eliminating the word "RUSH" wherever possible, on work going to the printer. Since then, type proofs have been near perfect the first time—extra charges have been reduced—and the work is being completed almost as fast as before!

*Luther W. Mendenhall,  
National Aluminate Corp., Chicago, Ill.*

## A 7-carload "dream"?

No—when the Toni Company ordered an amazing 7 carloads of printing paper



for a hair-care booklet, the order was based on facts—not someone's "dream"! For in the exacting school market (where the booklet was offered), material of this nature must fulfill a definite need to be successful. The need was discovered and a booklet prepared, based on the findings of Toni's field-trained Education Staff. Basically non-commercial in nature, the booklet gives teen-agers real help in the



art of hair-care. And in so doing, the Education Staff knew what the demand would be—accurately predicted a printing requiring 7 carloads of paper! Yet even now, it looks like that order may only be the first!

*Leah L. Anderson, Educational Director,  
Foote, Cone & Belding, Chicago, Ill.*

## Do you have an item of interest?

Tell it to Kimberly-Clark!

You, as an advertiser or buyer of printing, are invited to contribute to this column. Any item of interest pertaining to advertising or printing is acceptable, and becomes the property of Kimberly-Clark. For each published item, a \$50 Defense Bond will be awarded to the sender. In case of similar contributions, only the first received will be eligible for an award. Address Editorial Dept., Kimberly-Clark Corporation, Neenah, Wisconsin.



\* \* \*

As paper is once again on allocation, help prevent the shortage from spreading. And remember—you add crisp freshness and sparkling new sales appeal to all printed pieces—at less cost, with less waste—when they're done on fully-coated Kimberly-Clark printing papers. Use them whenever possible.

## Kimberly-Clark Corporation

NEENAH, WISCONSIN



Quality Machine-Coated Printing Papers

Hifect\* Enamel Lithofect\* Trufect\* Multifect\*



RESEARCH KEEPS

# B.F. Goodrich

FIRST IN RUBBER



Photo courtesy The Timken Roller Bearing Company

## Rubber spins whizzing saw into red-hot steel

### *A typical example of B.F. Goodrich product improvement*

**T**HAT long white strip at left is hot steel, 10 times hotter than boiling water. The flying sparks come from the whirling saw that cuts steel bars 11 inches thick into shorter pieces for making roller bearings.

But the belt got such a sudden jerk when the saw was pushed into the steel that an ordinary belt lasted only 60 days and had to have extra strips of leather riveted on once a month to help the belt stand the wear. This

meant stopping the saw for 8 hours. This was lost time, expensive time.

The company called in the B.F. Goodrich man and a BFG belt was installed—that was two years ago. The belt is still in service, looks good for a lot more and has never been stopped for repairs or "extras" to keep it in service.

This performance is typical, not an unusual case at all. It's the result of a policy at B.F. Goodrich—the

policy of constant product improvement, of never considering a product "good enough". If you use rubber belting, hose or other industrial rubber goods, it will pay you to check with your BFG distributor before you buy to see if you, too, can save money because of B.F. Goodrich research. *The B.F. Goodrich Company, Industrial and General Products Division, Akron, O.*

**B.F. Goodrich**  
RUBBER FOR INDUSTRY

# SHOVE OFF, SON— You're in Good Company!



## Equipment That Mobilizes America's Resources for Defense, Good Living.



**Crushing rock** for highways and construction—reducing ores for metal production is the work of powerful Allis-Chalmers crushers. Economical machine power like this helps America utilize its natural resources.

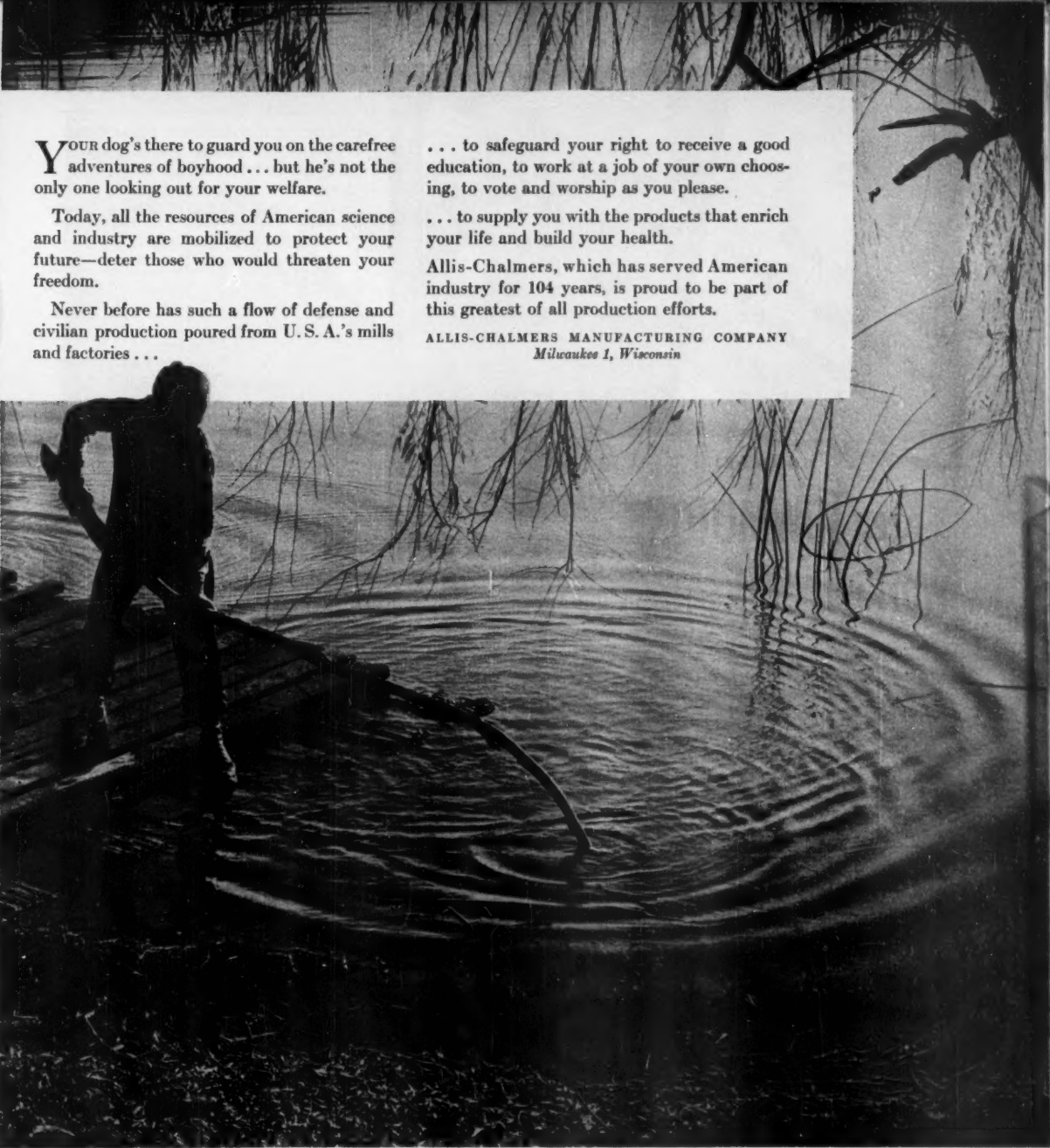
**Hoover, Shasta, Wilson, Pickwick** Landing and countless other dams harnessing America's water power use Allis-Chalmers hydro-power equipment. Allis-Chalmers water-wheels alone provide millions of horsepower of useful energy.



**Wheat** for nine of every ten loaves of bread in America is processed at least in part by Allis-Chalmers equipment. From planting and harvesting to milling and sifting, Allis-Chalmers plays an important role.

### **PROSPERITY POWER!**

America's strength, prosperity and good living have been paced by rapidly expanding generation and utilization of electric power.



**Y**OUR dog's there to guard you on the carefree adventures of boyhood... but he's not the only one looking out for your welfare.

Today, all the resources of American science and industry are mobilized to protect your future—deter those who would threaten your freedom.

Never before has such a flow of defense and civilian production poured from U.S.A.'s mills and factories...

... to safeguard your right to receive a good education, to work at a job of your own choosing, to vote and worship as you please.

... to supply you with the products that enrich your life and build your health.

Allis-Chalmers, which has served American industry for 104 years, is proud to be part of this greatest of all production efforts.

ALLIS-CHALMERS MANUFACTURING COMPANY  
*Milwaukee 1, Wisconsin*

# ALLIS-CHALMERS



One of the Big 3 in Electric Power Equipment—  
Biggest of All in Range of Industrial Products

## Memo

FROM THE OFFICE OF THE PRESIDENT  
TO: Plant Superintendent

Bill—  
What can we do to  
make available manpower  
more productive?  
J.W.

ANSWER:

# Keep TOWMOTOR working full time!

Available man-power is more productive with Towmotor Fork Lift Trucks providing continuous, 'round-the-clock service on heaviest handling, lifting and transportation jobs in your plant. Full time Towmotor operation is simplified by regular Preventive Maintenance Inspections which can be scheduled at your convenience. Every Towmotor Representative is equipped to provide this convenient service, as well as a full line of GENUINE Towmotor Replacement Parts, carefully packaged for your protection. For full information write TOWMOTOR CORPORATION, Div. 2, 1226 E. 152nd St., Cleveland 10, Ohio.

Towmotor Parts and Service are quickly available from Towmotor Representatives in all principal cities in U.S. and Canada.



**TOWMOTOR**  
THE ONE-MAN-GANG

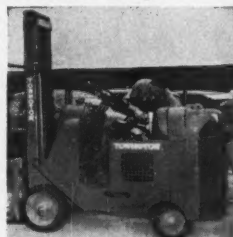
## FORK LIFT TRUCKS and TRACTORS

12 MODELS—A TOWMOTOR FOR EVERY JOB

RECEIVING • PROCESSING • STORAGE • DISTRIBUTION



Genuine Towmotor Parts are PACKAGED for ease of handling and elimination of damage.



Factory-trained mechanics make thorough periodic inspections to keep Towmotor working full time.

How many people have you talked to about AMERICANISM today?

## BUSINESS WEEK

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Herman C. Sturm

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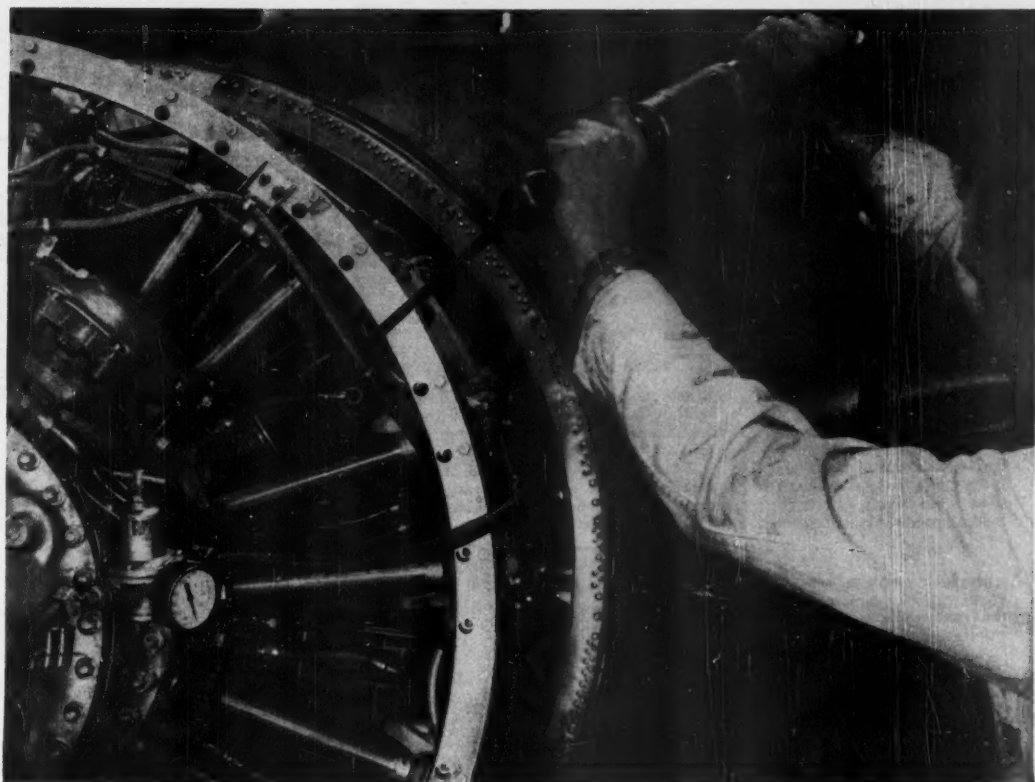
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BUSINESS WEEK • June 16, 1951





## NO "CEASE FIRE" HERE

### AN APPLICATION OF KELLER AIR TOOLS

Maintaining airplanes at peak performance has top priority along the airways. Engines must never cease firing when human lives hang in midair.

The specifications for ignition service demand that spark plugs be changed every 300 hours, even though they may appear to be in perfect condition. New plugs must be

tightened to 330 ( $\pm 30$ ) inch-pounds... that, too, is part of the specification.

To speed spark plug replacement and assure uniform torque, one of the great airlines has recently installed Keller Nut Setters and special air regulators. With this equipment spark plugs are drawn up with air power instead of by hand; and the tool

can be depended on to stall at exactly the desired torque.

Now spark plugs are replaced faster, and the torque is always exactly as specified.

This is another instance that shows how Keller Air Tools answer perplexing industrial problems. Keller engineers will gladly work with you to determine how Keller Tools may be used to speed up and simplify work in your plant.



*Air Tools engineered to industry*

**KELLER TOOL COMPANY, GRAND HAVEN, MICH.**

AIR MOTORS • AIR HOISTS • AIR HAMMERS • COMPRESSION RIVETERS • GRINDERS • DRILLS • SCREW DRIVERS • NUT SETTERS



Here...  
**BOSTITCH Stapling**  
is up to 50% faster

**VENETIAN BLIND MANUFACTURER** reports big savings in time and labor with Bostitch P6 Stapling Plier. Tape is stapled up to 50% faster than with other stapling machines. What's more, Bostitch Pliers use a heavier staple, give a more secure fastening, are better liked by workers. Operator, above, uses P6 Plier to staple end loops of tapes which are later fastened to metal head rail. Also used for many other applications, such as attaching tags, tickets, sealing various types of bags, containers, pairing garments, other assembly operations. Has tremendous holding power. Mail coupon below for further information.

**A FISTFUL OF POWER.** Air-driven P6 Stapling Plier, is operated by finger-grip. Eliminates fatigue on high production jobs.



**MATTRESS MANUFACTURER** reports Bostitch Model 1/2 C Stapler quickly fastens sisal pads to springs to make roll edge of innerspring mattress. Bostitch 1/2 C Staplers also used for piles of blueprints, invoices, other papers up to 1/2-inch thickness. For tough materials, too — fastening composition shingles, attaching tags to rugs.

**SHIPPING ROOMS** report Bostitch Foot- or Motor-Driven Bottom Staplers fasten bottoms of containers easily at high speed. Work goes through faster, goods are securely protected, arrive in better condition, assure customer satisfaction. Just one of many Bostitch Staplers, Tackers, Hammers that can remove shipping room bottlenecks.



**WHAT ARE YOUR FASTENING PROBLEMS?** There are more than 800 Bostitch machines available to help you cut costs. See your nearest Bostitch field man for advice — 300 in 112 key cities in the U. S. and in 11 key cities in Canada. Send coupon, too, for further information. No obligation.

Please attach this coupon to your firm's letterhead

**BOSTITCH**, 716 Mechanic Street, Westerly, R.I.

My present fastening method utilizes:

Nails ☐ Glue ☐ Tape ☐ Tacks ☐ Thread ☐ Pins ☐ Rivets ☐ Spot Welds ☐

I fasten the following materials:

Wood ☐ Paper ☐ Rubber ☐ Plastics ☐ Fabrics ☐ Leather ☐ Light Metals ☐

Please send me literature on specific Bostitch machines for my fastening needs together with your free "Time and Money Saving" book.

Name.....Title.....

Firm.....

Street.....

City.....Zone.....State.....

**BOSTITCH®**

fastens it better, with wire

ALL TYPES OF MACHINES  
FOR APPLYING STAPLES

ALL TYPES OF STAPLES  
APPLIED BY MACHINES

## In BUSINESS this WEEK...

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### Thoreau Was Right

• The man who once bossed the New Haven R.R. is the happiest he's ever been—in the woods. P. 76

### The A-Bomb and TVA

• Why the giant hydroelectric project will be turning out more power with steam than with water. P. 98

### Little Man, What Now?

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# Hold your hats, kids!

*we're ridin' with*

**PHILLIPS 66 GASOLINE!**



**A**BOUT 25 YEARS AGO, our company realized the advantages of *controlling gasoline volatility* to match the seasons and the climate. Such controlled volatility would give you easier starts, smoother power and greater economy all year long.

Our scientists and engineers raised controlled volatility from its babyhood in a laboratory to full scale maturity. As this sound idea grew, we grew with it. Today, more than 15,000 dealers in 26 states sell Phillips 66 Gasoline with "Controlled Volatility."

This is by no means an only child. Actually, we've raised so many brother and sister ideas that we're widely known as one of the most diversified of all oil companies. Our research, manufacturing and marketing now extend across a whole panorama of petroleum. We're active in synthetic rubber, carbon black, fertilizer and many other fields.

So—when you think of long established products like gasoline and motor oil—and of the younger generation of petrochemicals—think first of Phillips.



**PHILLIPS PETROLEUM COMPANY**

Bartlesville, Oklahoma

*We put the Power of Petroleum at America's Service*



*Every Second the Clock Ticks  
Over \$5 in Productive Time is Lost  
from Industrial Eye Accidents!*

You Can Prevent 98%  
of these Accidents  
with Safety Goggles  
averaging \$2.30  
in cost

The annual cost of industrial eye accidents in *lost productive time* alone is estimated at \$160,000,000—or about \$5 every second the clock ticks. In lost man power this represents the equivalent of 55,000 skilled workers who could be added to the productive work force each year if Eye Protection Programs were installed universally.

With skilled workers becoming increasingly short, it will pay you to look into the labor conservation and money-saving opportunities that an AO Eye Protection Program

can provide. Your AO Safety Representative can show you case history after case history in your own or allied industries where such a program has paid off in *greater output and lowered costs*. Ask him to call.

**FACTS TO REMEMBER:**

Industrial eye injuries cost over \$5 per employed worker per year — with compensation averaging \$328 per injured man even in the low-cost year of 1938.



American Optical  
SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES



# BUSINESS OUTLOOK

BUSINESS WEEK

JUNE 16, 1951



Military production will more and more set the pattern of production for the entire economy. But consumers will largely decide how much inflation we're to have.

The four-month sidewise movement of prices can be explained by one thing—a slowdown in consumer buying.

Forecasters who predicted continuous inflation in the first half of 1951 left the consumer out of their calculations. That's where they went astray.

Disposable income has been rising—just as everyone expected. But the fact that people have money doesn't mean that they are going to increase their spending—at least not right away.

In fact, consumers have been doing just what economists said they must do to avoid inflation. They have been saving. Part of their saving may be involuntary; tighter controls on consumer credit may have kept people from buying all they would like.

How long spending will keep on lagging is another question. Each month a new record is set in personal income.

In April wages and salaries were 19% ahead of the year before. Agricultural income was 30% ahead.

Businessmen looking at the high employment and income figures have reason to be disgruntled at the way customers are giving them the go-by.

At the beginning of May, business inventories were at a new record high of \$68.3-billion—up \$1.3-billion in a month. But sales in April were off \$1.8-billion from the month before.

Factory output keeps right on stepping high, wide, and handsome.

In May the Federal Reserve's index of industrial production inched up another notch to 223. But the big factory output probably meant that the manufacturers had to add to inventories some more.

Retailers, sated with merchandise, were reluctant to buy; they built up stocks only \$300-million in April. Manufacturers added \$1.3-billion.

How much metal will be left over for civilian goods after the military and defense-supporting industries take their cut?

The Purchasing Agents Assn. of Chicago asked its members whether they expected to lay off workers because of lack of materials. Only 18% said yes—but 62% of the members said they didn't think that there would be enough materials around to take care of a reasonable civilian production.

Construction continues to be a big bulwark to the economy.

Industrial building, which has been rising for over a year, shows not the slightest sign of letup. In May new plant was going up at an annual rate of \$2.7-billion. That's 2½ times greater than a year before.

Even commercial building—which the government is trying to cut down—just doesn't know when to quit.

In May commercial structures were being built at a yearly rate of \$1.6-billion. In 1950, the best year ever, work on commercial buildings amounted to \$1.3-billion.

The housing boom obstinately refuses to die gracefully on schedule.

New housing starts in May numbered 97,000—up 9,000 from April.

# BUSINESS OUTLOOK (Continued)

**BUSINESS WEEK**  
**JUNE 16, 1951**

That's not much compared to the year-ago high of 149,000—the record. But matched against any other May, it stacks up pretty well.

By now most of the applications granted on the old, easy credit terms have been worked off.

The continued high level of new housing construction surprises almost everyone—especially the builders themselves.

When they saw the tough credit terms of Regulation X last fall, builders threw up their hands. Some of them predicted that only 500,000 houses would be built in 1951.

But for the first five months, 444,000 new homes have already been started.

The total of new houses going up this year can hardly fail to hit the government's target ceiling of 850,000. It may run considerably higher than the Washington planners intended.

So far this year, the average is 89,000 homes a month. To reach the goal, only 58,000 a month would be needed from now on.

There is good news in the latest report on wheat crop prospects. It indicates that there's not much to worry about anymore.

The government has upped its estimate of winter wheat—as it often does in the spring—another 23-million bu.

That puts the indicated total at 705-million bu.—6% behind last year. But spring wheat is ticketed to come in at 349-million bu. That's 26% over a year ago and would be the biggest crop in 36 years.

Thus the year's supply should top 1-billion bu.—for the eighth time in a row. Even if consumption and exports should crowd production, there's a carryover of more than 400-million bu. to fall back on.

OPS is starting out to apply the "profits standard" on requests for price increases as though it meant business.

Copper fabricators tried to get OPS to allow price rises to cover the increased cost of foreign copper.

OPS said that profits were still over 85% of the best three years between 1946 to 1949. No price increase.

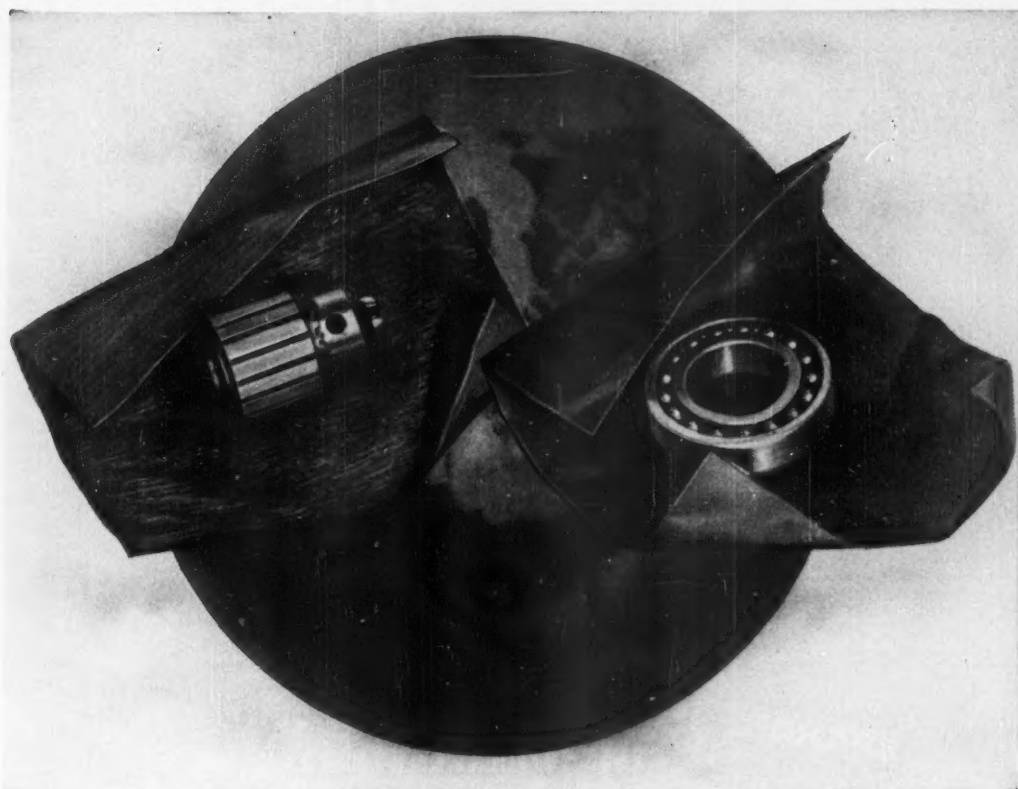
The RFC has found one good way to knock down high prices: Don't buy.

Tin was 76¢ a lb. before Korea. By February, 1951, it had risen to \$1.83. Then the government took over all buying, promptly cut stockpile purchases. Since then, the tin price has been drifting steadily downward. This week it stood at \$1.23.

Low steel scrap piles are just short of being serious.

Up till now, steel output has not been affected by lack of scrap. Whenever a mill would run out, the government would rush in the needed supplies.

But now the touch-and-go supply is starting to cut into production. This week low-grade scrap cut Pittsburgh's scheduled output from 105% to 102%. Crucible Steel Co. had to shut down a furnace for lack of enough scrap.



Combination of Lumarith Acetate Transparent Film and kraft paper passes Joint Army & Navy specification Jan-8-121

## Combination Wraps using Celanese\* Acetate Film

*DELIVER THE GOODS...ANYWHERE*

Precision machine parts with global destinations are now getting complete travel protection in combination wraps. These wraps are bonded laminations of kraft paper and Celanese acetate transparent film with a corrosion-inhibiting layer. The kraft paper supplies the toughness and the acetate film acts as a grease and water barrier. Deadfolding around the most irregular shapes, the combination wrap stays put, saves space and keeps the contents in prime condition until ready for use.

### THE RIGHT COMBINATION OPENS THE WORLD TO YOUR PRODUCT

Celanese acetate Transparent Film in combination with glassine, fabric, metal foil, other films or kraft paper is meeting government and industrial packaging specifications for all types of products: machine parts,

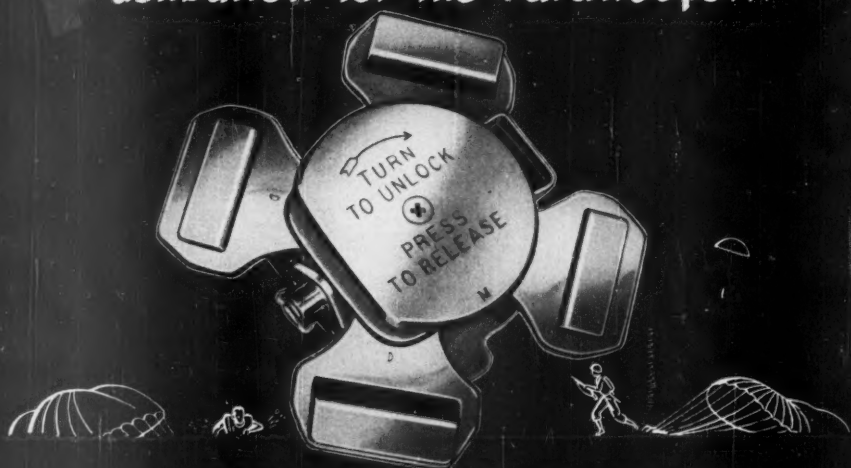
powdered coffee, food concentrates, pharmaceuticals, field rations . . . Write for specific information or names of laminators and convertors. Celanese acetate Transparent Film is sold under the registered trademark Lumarith\*. Celanese Corporation of America, Transparent Films Dept. 129-F, 180 Madison Avenue, New York 16. In Canada, Canadian Cellulose Products, Ltd., Montreal and Toronto.



TRANSPARENT FILM

\*Reg. U.S. Pat. Off.

ushbutton for the Paratroops...



## SHARON SPECIAL ALLOY STEEL IN QUICK RELEASE PARACHUTE HARNESS

A paratrooper's life may depend on the speed with which he escapes his parachute harness to fight.

A pilot bailing out over the water must release himself from his chute before he drowns. A large push button quickly releases harness sections. Just a twist and a push and the harness falls free.

A man's life hangs on the steel lugs used in this type harness.

The Air Corps needs a steel that has a high strength-weight ratio.

When the release was first developed, a leading manufacturer called in his Sharon representative, who worked with him in producing a special steel that met all requirements. Once again there is an urgent need for parachutes and again Sharon Steel is a leading supplier of this specially developed parachute steel.

\* Specialists in STAINLESS, ALLOY, COLD ROLLED and COATED Strip Steels.

### SHARON STEEL CORPORATION

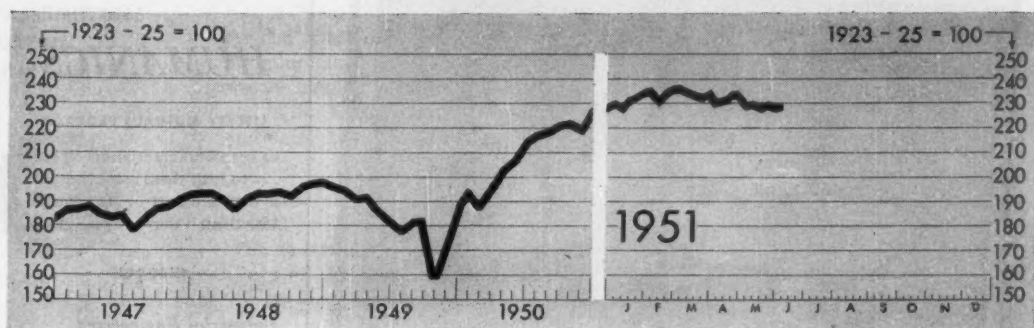
*Sharon, Pennsylvania*

DISTRICT SALES OFFICES: CHICAGO, ILL., CINCINNATI, O., CLEVELAND, O., DAYTON, O., DETROIT, MICH., INDIANAPOLIS, IND., MILWAUKEE, WIS., NEW YORK, N. Y., PHILADELPHIA, PENNA., ROCHESTER, N. Y., LOS ANGELES, CALIF., SAN FRANCISCO, CALIF., MONTREAL, QUE., TORONTO, ONT.

SHARONSTEEL



# FIGURES OF THE WEEK



**Business Week Index (above)** . . . . . \*229.7    †229.5    230.3    213.4    173.1

## PRODUCTION

|  | \$ Latest Week | Preceding Week | Month Ago | Year Ago | 1946 Average |
|--|----------------|----------------|-----------|----------|--------------|
| Steel ingot production (thousands of tons)                               | 2,063          | 2,063          | 2,077     | 1,927    | 1,281        |
| Production of automobiles and trucks                                     | 155,174        | †121,476       | 158,502   | 200,515  | 62,880       |
| Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands) | \$43,908       | \$43,421       | \$43,558  | \$43,527 | \$17,083     |
| Electric power output (millions of kilowatt-hours)                       | 6,734          | 6,445          | 6,567     | 5,921    | 4,238        |
| Crude oil and condensate production (daily av., thousands of bbls.)      | 6,168          | 6,169          | 6,162     | 5,305    | 4,751        |
| Bituminous coal production (daily average, thousands of tons)            | 1,596          | 1,626          | 1,618     | 1,696    | 1,745        |

## TRADE

|   |     |     |     |     |      |
|---|-----|-----|-----|-----|------|
| Miscellaneous and l.c.l. carloadings (daily av., thousands of cars) | 79  | 79  | 79  | 76  | 82   |
| All other carloadings (daily av., thousands of cars)                | 57  | 57  | 55  | 53  | 53   |
| Department store sales (change from same week of preceding year)    | +5% | +3% | +8% | +1% | +30% |
| Business failures (Dun and Bradstreet, number)                      | 172 | 132 | 181 | 164 | 217  |

## PRICES

|  |         |         |         |         |         |
|--|---------|---------|---------|---------|---------|
| Spot commodities, daily index (Moody's Dec. 31, 1931 = 100)        | 493.4   | 492.1   | 501.9   | 398.2   | 311.9   |
| Industrial raw materials, daily index (U.S. BLS, Aug., 1939 = 100) | 340.7   | 343.4   | 354.2   | 242.8   | 198.8   |
| Domestic farm products, daily index (U.S. BLS, Aug., 1939 = 100)   | 379.2   | 381.7   | 398.3   | 328.1   | 274.7   |
| Finished steel composite (Iron Age, lb.)                           | 4.131¢  | 4.131¢  | 4.131¢  | 3.837¢  | 2.686¢  |
| Scrap steel composite (Iron Age, ton)                              | \$43.00 | \$43.00 | \$43.00 | \$39.58 | \$20.27 |
| Copper (electrolytic, Connecticut Valley; lb.)                     | 24.500¢ | 24.500¢ | 24.500¢ | 22.500¢ | 14.045¢ |
| Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)         | \$2.35  | \$2.36  | \$2.40  | \$2.20  | \$1.97  |
| → Cotton, daily price (middling, ten designated markets, lb.)      | 45.18¢  | 45.19¢  | 45.22¢  | 33.95¢  | 30.56¢  |
| Wool tops (Boston, lb.)  | #       | #       | #       | \$2.28  | \$1.51  |

## FINANCE

|   |              |              |          |              |       |
|---|--------------|--------------|----------|--------------|-------|
| 90 stocks, price index (Standard & Poor's)                          | 171.1        | 170.0        | 175.6    | 152.5        | 135.7 |
| Medium grade corporate bond yield (Baa issues, Moody's)             | 3.46%        | 3.43%        | 3.39%    | 3.27%        | 3.05% |
| Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate) | 2 1/2-2 1/2% | 2 1/2-2 1/2% | 2-2 1/2% | 1 1/2-1 1/2% | 1-1%  |

## BANKING (Millions of dollars)

|   |        |         |        |        |          |
|---|--------|---------|--------|--------|----------|
| Demand deposits adjusted, reporting member banks                | 50,286 | 50,034  | 49,574 | 47,519 | ††45,210 |
| Total loans and investments, reporting member banks             | 69,037 | 69,369  | 69,392 | 66,960 | ††71,147 |
| Commercial and agricultural loans, reporting member banks       | 18,992 | 19,048  | 19,164 | 13,394 | ††9,221  |
| U. S. gov't guaranteed obligations held, reporting member banks | 30,207 | 30,443  | 30,339 | 36,183 | ††49,200 |
| Total federal reserve credit outstanding                        | 23,546 | †23,396 | 23,706 | 18,143 | 23,883   |

## MONTHLY FIGURES OF THE WEEK

|  |       |           |           |           |          |
|--|-------|-----------|-----------|-----------|----------|
| Personal income (seasonally adjusted, in billions).....      | April | \$244.4   | \$242.8   | \$213.8   | \$177.7  |
| Farm income (seasonally adjusted, in billions).....          | April | \$19.7    | \$18.8    | \$15.1    | \$18.9   |
| Housing starts (in thousands).....                           | May   | 97.0      | 88.0      | 149.1     | 55.9     |
| Private expenditures for new construction (in millions)..... | May   | \$1,705   | \$1,673   | \$1,694   | \$803    |
| Public expenditures for new construction (in millions).....  | May   | \$813     | \$697     | \$584     | \$197    |
| Bank debits (in millions).....                               | May   | \$130,698 | \$128,437 | \$112,095 | \$87,502 |

→ See page 106.

†† Estimate (BW—Jul. 12/47, p16).

\* Preliminary, week ended June 9.

† Revised.

‡ No trading at OPS ceiling price—\$3.35.  
§ Date for 'Latest Week' on each series on request.



## THE TWINGE THAT CAUSED A TRAGEDY

Mike Miller was a reliable machinist. The machine was well guarded. That's why the foreman was baffled the day Mike lost two fingers. The real cause of the accident was in Mike himself. He was suffering from arthritis in the shoulder. This caused him to adopt an awkward position for his hand, and his fingers got caught.

### *The solution*

Mike's accident could have been avoided if the plant had a program of industrial preventive medicine. If the foreman had been informed of Mike's physical limitation, the machine could have been adjusted so that his awkwardness would not have been dangerous.

### **HUMANICS: A New Concept**

Liberty Mutual helps policyholders to set up plant medical controls through their full-time or part-time doctors. But industrial preventive medicine is only one phase of Liberty Mutual's comprehensive program. It's called **HUMANICS**—the science of preventing loss—which brings together all activities for preventing accidents and reduc-

ing the pain and expense of accidents when they do occur.

**HUMANICS** guards machines... and puts "invisible guards" around men to safeguard them from themselves. It concerns itself with medical care of injured workers, and the rehabilitation of the badly injured. It is not a departmental activity with Liberty Mutual, because the prevention of loss in all forms and the consequent reduction of compensation insurance costs is the basic business of the company.

### *You can check your own program*

"**HUMANICS: A NEW CONCEPT OF LOSS CONTROL IN INDUSTRY**" is a booklet describing five ways to reduce the cost of Workmen's Compensation Insurance, increase productivity and improve employee relations. A request on your business letterhead will bring you a copy without cost or obligation. Address Liberty Mutual Insurance Company, 175 Berkeley Street, Boston 17.

## **HUMANICS**

### **LIBERTY MUTUAL'S PROGRAM**

to keep workers from being hurt  
... to help them recover sooner  
if they are hurt ... to rehabilitate them if they are badly hurt,

### **THROUGH**

#### **Industrial Engineering**

to eliminate physical and mechanical hazards

#### **Industrial Hygiene**

to assure a healthful working environment

#### **Industrial Preventive Medicine**

to fit the right man to the right job, or to adjust the job to the man — and to protect the worker's physical fitness.

#### **Claims Medical Service**

by eminent specialists, to facilitate the rapid recovery of injured workers

#### **Rehabilitation**

to restore badly injured workers to useful, productive lives, through Liberty Mutual's Rehabilitation Center in Boston and Chicago and auxiliary services elsewhere.



*We work to keep you safe*

# WASHINGTON OUTLOOK

WASHINGTON  
BUREAU  
JUNE 16, 1951



A "deal" on Korea is the big question mark over Washington's plans. An end of the shooting isn't supposed to change the mobilization aims. But Truman hasn't done a thorough job of putting over the idea that it's Russia we are mobilizing against. And now the Administration is worried that an end to the Korean fighting would throw the whole defense effort off balance and delay the buildup.

Controls are a good example. Truman delayed asking Congress to extend price, wage, and credit powers, plus extras, to the last minute. The evident strategy was to get them in the atmosphere of an emergency, just ahead of the June 30 deadline.

The strategy isn't working. Now Truman is "going to the people," trying to light a fire under Congress and force a pro-Truman vote.

Control powers will be kept. This needs saying again. But odds are they will be retained on a temporary basis, only 60 to 90 days at a time, until the need for them is clearer. And there's no chance Truman will get the extra powers he asked.

Business licensing is out. Truman wants power to close a business if it violates price ceilings. But Congress won't vote it, certainly not while DiSalle's price edicts are so confusing.

Commodity exchange control won't be tightened. Farmers are opposed.

Home rent ceilings will be continued, but the law won't be stiffened.

Commercial rents won't be brought under federal control. Congress' attitude is that state legislation can do the job where necessary.

Food subsidies haven't a chance, short of a big war. The experience of World War II convinced Congress that they are only disguised price increases passed along to the taxpayers.

Truman may take to the hinterlands, with an old-time speaking tour. The obvious reason will be to put pressure on Congress to get his bills through. But more important, long-term, is a Truman desire to test his pull. He hasn't given up the idea of running in '52. And a nonpolitical swing would indicate whether he still has the appeal shown in the '48 upset.

Marshall's quick trip to Korea was tied in with talks to stop the war. There's speculation that he made arrangements with U. N. commanders to dig in, somewhere about the 38th parallel, and hold on there while the U. N. dickers with China. Officials were gloomy as Marshall returned. They still had no sign that the Reds are willing to accept a cease-fire on any terms.

Washington's appraisal of the business outlook is beginning to sound a little less bullish.

The public talk still is of inflation, with a new upsurge this fall. You get it in the statements by Truman and from control agency heads who are fighting with Congress to keep their stabilization powers.

Private talk is a little different. Officials stand by statements that controls must be continued, but they aren't so certain of a sharp business upturn after the summer ends. Inventories still are high. With arms production lagging behind schedule, there's more thought that the consumer buying surge expected this fall may not amount to much before

# WASHINGTON OUTLOOK (Continued)

WASHINGTON  
BUREAU  
JUNE 16, 1951

winter or even next spring. Then, of course, there is the prospect that a cease-fire would bring a severe, though temporary, business jolt.

•  
**The beef row is hot**, with the price rollbacks scheduled for Aug. 1 and Oct. 1 getting mixed up in Democratic politics.

**It's a tossup** whether DiSalle will see the rollbacks through. A beef shortage in the stores is getting the housewives down on his neck. But more important, pressure on the White House to stop the price cuts is coming from Truman friends, who also are big money raisers for the party.

•  
**Prospects of electric power shortages** in the next 12 to 18 months have mobilization boss Wilson worried. Wilson is afraid extra power won't be available in time to meet the needs of new steel, chemical, aluminum, and atomic energy plants scheduled to go into operation during 1952. He'll give power a top priority. Even this may not avoid delays in getting the new plants into capacity operation.

•  
**Remember the union walkout to get a bigger say in mobilization?** It landed George Harrison of the railway clerks in Wilson's office. But Harrison doesn't seem in any rush to get down to work. He was sworn in last week and hasn't been to ODM since. Now he's about to go to Europe to the International Confederation of Free Trade Unions convention.

•  
**The military is challenging the defense program as not big enough.**

**The position of the services**, as reflected by the three chiefs of staff, is that Truman's \$60-billion in fiscal '52 is too small, when stacked against our commitments around the world. Their argument is that we have to stay strong in the Pacific, Korea or no Korea. This will delay the time when we can feel comfortable in Europe, unless the whole mobilization program is expanded quickly.

So they are talking it up for a big addition to the \$60-billion.

**The Air Force is the biggest pusher.** Air Chief of Staff Vandenberg wants his sights raised from the present target of 95 groups to 150. He figures that's the minimum to meet Pacific needs, be ready in Europe, and have enough spare strength for other Koreans.

**The Army wants more men.** Staff Chief Collins wants to call up four more National Guard divisions quickly to fill gaps until draftees can be turned into soldiers.

**The Navy wants more ships.** Its chief, Adm. Sherman, talks about reactivating four carriers, plus supporting vessels.

•  
**This adds up to more men as well as more money.** Barring "incidents," it seems unlikely that the service chiefs will get any support for their ideas now, either from their Pentagon bosses or from Congress. Politicians hesitate to pinch the civilian economy really hard ahead of the 1952 elections, if it can be avoided.

**What's the significance of this military thinking now?** It will tend to keep steam under defense, if and when Korea folds.

**Longer-range**, it probably means that rearmament goals will be upped beyond what is scheduled for the next two years.



# Where in the world is all the coal coming from?



**Today, the call is for more coal**—still more coal—to make all the steel and the thousands of other things that go into ships and tanks and planes. And that's on top of all the coal used for power—by the railroads and utilities—in the factories—and for home heating. And remember, nearly 18,000,000 homes, more than half the homes in the country, depend on coal for heat. *Will there be enough to go around?*

The answer is YES, enough for every need—for this country's coal companies have led America to first place in world coal production—*three times* that of any other country.

America's leadership in coal is no accident. 92% of America's total fuel reserves are in coal. And progressive coal companies have equipped the U. S. miner with the world's most efficient mine machinery. Thus the American miner, today, has a daily output *4 to 24 times* as great as that of any miner in Europe or Asia.

Out of today's giant preparation plants comes better coal. Fortunately, too, coal burning equipment has been greatly improved, so that one ton of this better coal, used under the

more efficient modern boiler, yields as much energy as did three tons—a relatively few years ago!

America's leadership in coal production is a direct result of free competition. The operators of this country's 9,000 privately owned coal mines have had to keep up with each other in efficiency or go out of business. In their competitive effort, the coal companies have invested hundreds of millions of dollars in research—in modern mining equipment and in developing new mine properties!

America's privately managed coal companies are doing a production job that no government-owned or dominated coal industry, anywhere, can begin to match!

## BITUMINOUS COAL INSTITUTE

A DEPARTMENT OF NATIONAL COAL ASSOCIATION

WASHINGTON, D. C.

FOR NATIONAL DEFENSE  FOR PEACETIME PROGRESS.

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*more copper mining equipment in the U. S. is lubricated with Texaco than with any other brand.*

**ONE PURCHASE AGREEMENT** sets up this plant analysis, higher production program for all your plants, wherever located. Call the nearest Texaco Distributing Plant or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

\*Name on request



**THE TOUGH JOBS GO TO TEXACO**

**TEXACO**  
**INDUSTRIAL LUBRICANTS**





STABILIZER Eric Johnston and . . .



WSB CHAIRMAN Taylor pass to . . .



PRICE ADMINISTRATOR DiSalle the burden of keeping wages in check. Result is . . .

## A Steering Wheel for Wages, No Brake

The final piece of President Truman's economic stabilization machine was about ready to go into place this week. It's the new wage formula. For many businessmen it will probably turn out to be the most troublesome of all the direct economic controls.

• **Tied to C of L**—The formula ties wages to the cost of living and thus puts the burden of control on Price Administrator Michael DiSalle (picture). In this respect it is radically different from World War II's wage controls. The policy then was to hold the line on wages and prices alike.

The new policy is to hold the line on prices, leave wages flexible. And with jobs plentiful and labor scarce, unions will be out to get all the formula allows on living costs, productivity gain, pensions, and the like. So you can count on wage costs moving up. As one government official describes it, "This policy isn't a brake on wages, it is a steering wheel."

Prices, too, will have to go up even-

tually to cover at least part of the higher labor costs. But economic stabilizers hope that they will be able to manipulate hard price ceilings and soft wage controls so as to keep inflation "orderly."

This is bound to bring a squeeze on profits (BW—Jun. 9 '51, p. 27).

• **Politics Plus**—There's politics in this stabilization policy. It's popular to fight high prices and go easy on the things that make prices rise.

There's also economics in it. The demand for manpower in the coming year is going to be so great that Washington figures the country must have a flexible wage policy; otherwise it would be difficult, if not impossible, to shift labor into defense work and draw new workers into the labor force.

### I. The Five Crucial Points

No one has yet spelled out the wage formula precisely. But the Wage Stabilization Board has given some unmis-

takable tips on what it will come up with. In outline, the formula will fall into five parts:

(1) Basically, the policy will relate wage adjustments to changes in the cost of living.

(2) It will allow for wage hikes based on increased productivity in those industries that have contracts calling for "annual improvement" increases—provided employers guarantee not to raise their prices to compensate. (WSB made this very clear in the decision that it handed down to General Motors just last week.)

(3) It will correct for interplant wage "inequalities" to protect an employer from losing his manpower to a higher-paying employer across the street.

(4) It will give employers leeway to adjust wages between employees, while keeping the plant's general wage level on an even keel.

(5) It will make concessions to critical defense industries for wage increases where they are necessary to hold or at-

tract workers—provided these increases are justified by government manpower and production agencies involved.

• **Breaks Precedent**—In some respects, the new formula will be like the World War II version of wage control. Adjustments to attract manpower and to correct for interplant and intraplan inequalities are hand-me-downs. And the allowance for increased productivity is really an expansion to today's hourly paid workers of the wartime O.K. on piece-work incentives.

But WSB really breaks precedent in its basic approach—tying wages to cost of living. The government refused to do this during the war. In fact, it clearly broke the line between prices and wages through the Little Steel formula, which limited general wage rises all during the war to 15% above the level of Jan. 1, 1941.

• **Turnabout**—Ironically, the man who conceived the Little Steel formula, Dr. George W. Taylor (picture, page 19), then vice-chairman of the War Labor Board, is also the chief architect of today's wage policy as WSB chairman.

Taylor's, and the government's, about-face from Little Steel policy pivots on at least two factors. The government does not want to upset the five-year, cost-of-living, escalator contracts signed in the auto industry by CIO president Walter Reuther.

That would have invited strikes. Also, it did not feel that it could clamp a firm lid on wages at a time of manpower shortages without stiff manpower controls and without a real war to win labor's patriotic support.

## II. Interpretation

Though it's possible now to nail down the main points of Administration wage policy, there's still a great question as to just how liberally WSB will oper-

ate within that framework. The answer rests on the outcome of an interpretive tug-o'-war going on now between WSB and Economic Stabilizer Eric Johnston (picture, page 19).

Johnston recently got tough with the board and laid down the law on what he thinks it should "recommend" to him. Whether he can force his will on a majority of WSB's 18 members remains to be seen.

Actually, it is essential that the board's recommendations be accepted by Johnston. If they are not, WSB will lose its effectiveness and might again break up as it did in February.

There are three major points of policy at issue now between WSB and Johnston:

On cost of living, Johnston wants to limit the present round of wage increases to 10.5%—the amount by which the Consumers' Price Index of the Bureau of Labor Statistics has risen since the base date of Jan. 15, 1950. But back in February, the board set an arbitrary ceiling of 10% on catch-up wage increases. As the BLS index has risen 3% since February, WSB thinks that Johnston's stand on a 10.5% limit is unrealistic. It favors a ceiling of about 13%.

On base dates, some public members of WSB would like to see a floating base date, perhaps establishing it as the date of the last freely negotiated wage contract before the wage freeze of Jan. 25. WSB would look at the last agreement as "fair" and seek to preserve the real wage of that agreement by making allowance for the rise in the C of L since then. Johnston wants a fixed base date.

"Annual improvement" wage increases have been approved by WSB for a 4¢ increase over prefreeze wage contracts. Johnston thinks these increases should be limited to 2% (which in most cases would be less than

4¢) and that employers should also certify that they are getting increased output from their workers.

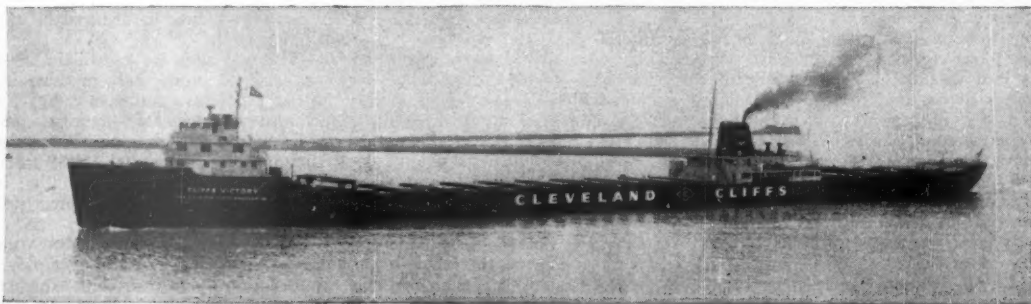
• **Upward Trend**—Regardless of how Johnston and WSB adjust their differences, the trend of wages under the new policy will be upward. And the speed of this upward movement will depend largely on how DiSalle makes out with his price controls. If he is fairly successful in holding the price line, then the rise in wages will be correspondingly gradual. If he loses his grip on prices at any time, the sky will be the limit.

## Clothing Industry Gets Tailor-Made Price Lid

The Office of Price Stabilization gave the clothing industry its own specially tailored price regulation this week. Some increases will occur in woolen garments; those of other textiles are expected to be rolled back a bit.

The new order—Ceiling Price Regulation 45—permits apparel makers to add increases in factory payroll and material costs to prices in effect during optional base periods—any three consecutive calendar months between July 1, 1949, and June 24, 1950.

• **Special Provision**—CPR realizes that in the clothing business every season brings a virtually new line of goods. A manufacturer rarely has a base period to which his post-Korea cost increases can be added. To allow for this, the order lets the clothing maker price a new article by comparing it with a group of similar articles sold in the base period. This group, however, must contain the biggest items that made up 50% of his business. This proviso prevents picking a single high-priced, low-volume article for comparison.



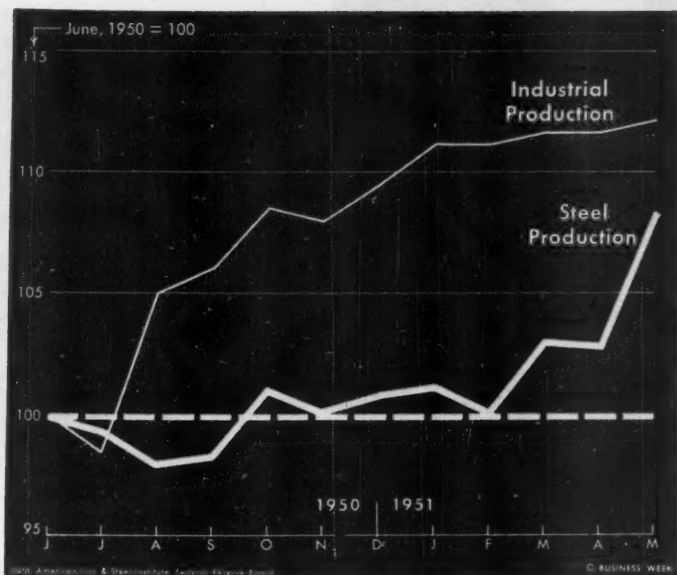
## BELLE OF THE LAKES IS A WORKHORSE NOW

The Cliffs Victory, latest addition to the Great Lakes ore fleet, has gone to work. Behind the one-time sea-going Victory ship—now elongated for ore work—are the glamor of her maiden voyage and the much-

publicized feat of her trip from the Atlantic to the Lakes (BW—May 19'51, p22). On her first ore-carrying run, the Cliffs Victory shaved 20 hours from the normal 57-hour trip from Marquette, Mich., to Cleveland

and carried 13,089 gross tons of iron ore. When she steamed through the Cleveland breakwater (picture), there was a hoopla reception. Then the big craft sailed off again to get more ore.





OUTPUT of steel seems to be keeping pace with production needs. But . . .

## Is Steel Supply Easing Up?

It depends a lot on what kind you want and when you want it. The increased military take-off to a slow start—will be pretty much offset by further increases in production.

Officially, the outlook for civilian steel supplies—just two weeks before that metal goes under the strict allocations of the Controlled Materials Plan—is about as black as night. Never before, except in the case of all-out war, have things looked so tough.

But that could be a mirage. For one thing, steel output has pretty well kept pace with industrial production and has not lagged behind (chart). Also, here and there inside the steel industry, you hear a scattering of hopeful talk. A few of the steel barons began to sound off optimistically at the annual meeting of the American Iron & Steel Institute last month. Since then, their rather general statements have been supported a little more in detail. But there also has been some watering-down of earlier statements to add to the confusion.

• **What's Really Going On?**—Is steel then really getting more plentiful? There is no unequivocal answer to that question. A lot depends on what kind of steel you want and when you want it. Here is the way the situation shapes up this week:

Since June, 1950, the last pre-Korea month, industrial production as measured by the Federal Reserve Board Index has risen 12.1%. In the same pe-

riod, steel tonnage produced has moved up 11.7%. That would indicate two things: (1) Steel has been able to move up fast enough to support a rapid expansion of the economy; (2) the expansion so far has not been out of line with steel supplies.

The output of ingots and steel for castings in the first five months of 1951 was higher than ever before, a rise of 12% over the similar 1950 period.

• **Military Orders Are Slow**—Of course, the military demand for steel is supposed to pick up more rapidly in the second half of 1951 and all through 1952. Nevertheless, government economists now estimate that total steel take for direct military purposes for 1951 won't total more than 7-million tons. That figure is expressed in tons of finished steel. It would amount to 9-million tons of ingot production—equal to one month's output this year.

• **Defense-Program Bite**—A bigger impact on the steel supply is made by the defense-supporting programs. They are supposed to take 22-million tons in 1951. When you add up direct military and defense-supporting needs, you get a 29-million-ton figure for the total defense take in 1951. This would leave 51-million tons for civilian use

out of an estimated total finished steel output of 80-million tons.

That amount is only about 65% of all available steel so it sounds like a pretty big blow to civilian steel consumers. But many industries in the defense-supporting category are lines that normally would be considered civilian—freight cars, locomotives, farm machinery, for example. When they eat on the military's meal ticket, they aren't charged against the civilian quota, too.

• **Feast or Famine**—To get a decent picture you have to analyze steel requirements on a product basis. For example, everyone knows that steel plates and bar stock are virtually unobtainable for anyone other than a defense purchaser. But almost everyone forgets that the defense take for tin plate and rails is little more than a drop in the bucket.

A Pittsburgh producer was talking last week about finding customers for one of his products—wire rope. Right after Korea, the demand for wire rope was terrific, but it seems to have faded out all of a sudden.

A large pipe producer said this week that it was beginning to make pipe shipments to some customers considerably in advance of the time when those orders were scheduled to be filled.

• **Gray Market Shrinks**—The gray market in steel has shrunk to the point where it can hardly be detected any more. Prices on the gray market also have weakened considerably recently.

There is less conversion steel being produced today. Part of that is due to the fact that some government regulations work against this practice. But there are also signs that conversion steel buyers are getting tired of paying the extremely high prices conversion steel costs.

• **Hypo for Inventories**—If steel is really beginning to loosen up, consumers may have a chance to get their inventories into better balance. One of the major complaints in recent months has been unbalanced inventories. But no one has ever complained about the items in long supply, only those in short supply.

• **Production Will Increase**—Government officials have forecast an increasing drain on steel supplies for military purposes. Next year the amount of steel needed for direct military programs will be about double the amount taken this year. That would indicate a steadily shrinking supply of steel for civilian users. But the increased military take will be offset wholly or in part by further increases in steel production. This year total steel ingot production will amount to about 107-million tons. By the end of next year steel production will be moving up toward a 120-million-ton rate. Certainly, by that time, there should be steel enough to meet all military and most civilian steel demands.



Harvard Business School, Class of 1926:

## The Old Grads Return For Fun—and Business

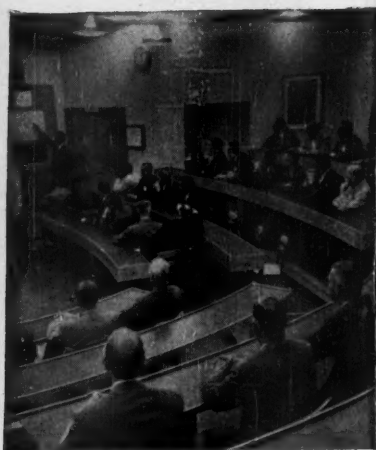
Last week five graduating classes of Harvard Business School gathered to sow a genteel wild oat. It was class reunion week. But unlike most reunions, the old grads diluted their reminiscences with panel discussions and round-table conferences. The subject was business.

The classes—'21, '26, '31, '36, and '41—disposed of the rah-rah stuff pretty quickly on Friday. Saturday they settled down for a day of serious listening at the 21st National Business Conference. Subjects included trends in Latin

America, the Communist threat to Asia, business statesmanship, the effect of mobilization, and inflation.

The two-day session brought together just about as large a group of business brains as any gathering in the country. Some, of course, came just for the reunions. "For tax purposes," said a '21 grad, "it is a conference." But it took a solid day of shop talk to get most of them back on the campus.

Most frequent question: "How's business?" Answer: "Pretty good."



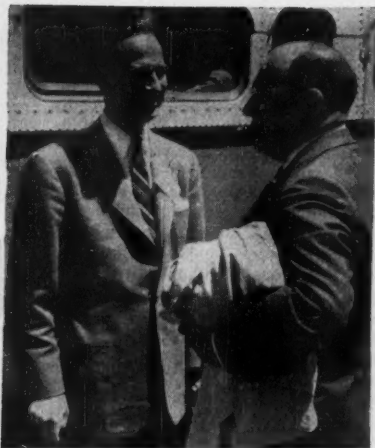
**2** Old classmates got a look at modern facilities in Baker Library. Class of '26 was last one before school got its own campus.



**5** Top brains of class included R. E. Anderson, Jr. (left), and E. B. Kapp. Anderson is with Goldman, Sachs; Kapp with Lehman Bros.



**7** J. W. Powell, Jr., of American Research & Development Corp., emceed luncheon.



**3** President T. Spencer Shore (left), of Eagle-Picher Co., talks old times with Myron Silbert, Federated Department Stores.



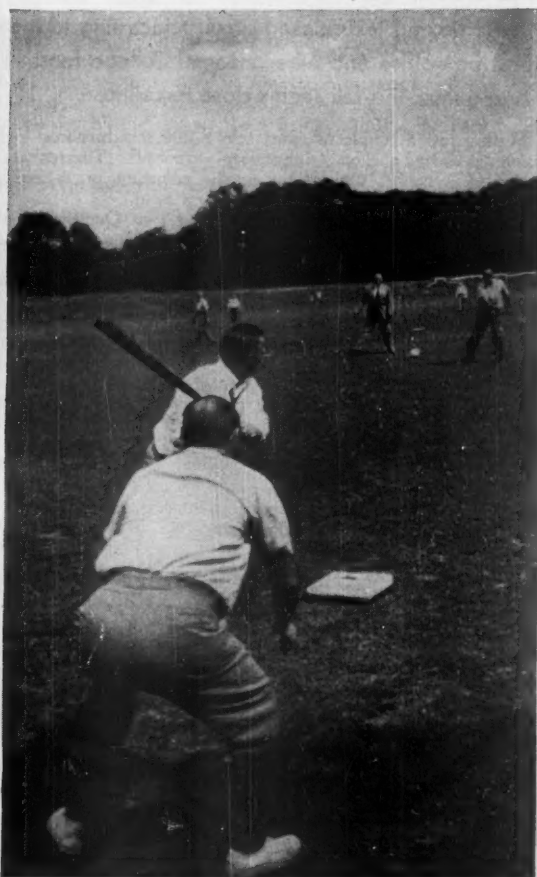
**4** Off to Dedham Country Club. Left to right: C. C. Merrifield, Econometric Institute, New York City; W. B. Van Houten, Providence (R. I.) bank economist; George J. Sallee, Case Pomeroy & Co., N. Y.; and C. A. Leas, West Manchester (Ohio) banker.



**6** Reunion's best-loved professor Arthur Stone Dewing (center) is toasted by L. M. Williams, Jr., president of Freeport Sulphur Co., and Serge Semenenko, First National Bank of Boston.



**8** Professor Dewing, now retired, got a standing ovation at lunch. He taught finance, was anything but an ivory-towered professor.



**9** Day ended with baseball, golf, and swimming. Class of '26 had 364 students, about 340 still living. At reunion: 63.



**HARD WORDS** from NCAA committee follow Pennsylvania's bolt from its ban on college football telecasts. More trouble will come over the growing question of . . .

## Sports and TV: What Next?

Boxing tests closed-circuit telecasting to theaters to try to boost box-office and other income. College football ban on televising games this fall seems close to collapse.

Within just a couple of years, television has blasted a whole string of deep-rooted U.S. habits. One of the most profitable of these habits is the sports business, a major American enterprise, which seemed as indestructible as Babe Ruth's home-run record.

• **Bitter Irony**—To the sports promoter, there is a great and bitter irony in what has happened. He knows that TV has increased the number of fans for all sports by the millions. Yet he is convinced that TV is almost solely responsible for keeping the paying customers away from his box office in droves.

At one time, neither snow nor heat, nor hard stadium concrete seats could stay the average American from being on hand personally to pull his team to victory. Now, say the promoters, a single cloud in the sky will decide a fan to root for his team at an unheeding TV screen in his living room. What TV rights bring in from sponsors doesn't offset the box-office loss.

• **First Crack**—This week New York boxing promoters took the first really solid action to try to offset the effects of TV. The International Boxing Club decided it would neither broadcast nor televise over the air the Joe Louis-Lee Savold heavyweight fight from the Polo Grounds. Instead, it televised the bout on a closed circuit to about nine theaters outside New York City.

This was admittedly only an experiment. The take IBC would get from the nine theaters would amount to almost nothing compared with the \$100,-

000 that broadcast rights would cost a sponsor. (Theaters are charging regular admission prices, averaging around 65¢ a head.)

• **Two Questions**—But the promoters are willing to take that loss to find out two things that may have a bearing on the whole future of sports telecasting: First, will the difference it makes in gate receipts at the fight itself justify limiting telecasts in the future? And second, did the fight draw people from their homes, where they can watch other shows free, into theaters where they must pay to see a fight?

The latter point is the one IBC is more interested in. A year from now there may be some 200 theaters equipped to take closed-circuit telecasts off the coaxial cable—even though equipping each theater costs \$15,800. In that case, IBC would get much more than a sponsor's \$100,000 for a fight just from its theater box office.

• **College Uproar**—But scarcely had IBC taken this action than another sport unexpectedly moved in the opposite direction. Last winter the National Collegiate Athletic Assn. had voted to place a one-year ban on telecasts of virtually all college football games (BW—Jan. 27 '51, p. 49). It, too, planned to experiment with theater television, showing games in theaters outside the area where the game is being played.

But last week the University of Pennsylvania, an NCAA member, put college football in the midst of a turmoil by bolting from the agreement.

It said it would telecast all its games this fall and gave two reasons. One was that it didn't think it a wise policy "to prevent millions from seeing intercollegiate football on television in a vain attempt to force more thousands to pay admission at the stadium gate."

Its second reason had a more ominous ring. Said Penn: The NCAA action on banning live telecasts might be a violation of the Sherman antitrust law.

• **Firm Ground**—That possibility may well stop other NCAA member schools from carrying out their threat to cancel scheduled games with Penn. Legalists say that such a move might be interpreted as interstate commerce. Even if the Justice Dept. stayed out of it, the canceling colleges and the NCAA might find themselves open to treble damage suits from Penn, the network carrying the game, and the sponsor of the program.

All this means that the whole NCAA plan stands in jeopardy. Many schools already know that they stand to lose more than they gain by not televising games. Most notable of these is Notre Dame, which even in a losing season last year managed to fill its stadium every week and still make extra money telecasting its games. So in all likelihood, it will go along with Penn and decide to bring in an extra \$500,000 by televising its home games this year. If it does, the NCAA ban is likely to collapse.

• **Interest Elsewhere**—Meanwhile, a lot of other major sports are watching all this activity with keen interest. Major-league baseball, which hasn't yet taken much action against televising games, has nonetheless been affected at least indirectly by TV. Three government probes are under way or about to start to find out whether there have been any antitrust violations by the big leagues.

The basis of all these investigations stems from the question of whether or not the airing of contests makes sports interstate commerce. Many years ago, a Supreme Court ruling held that organized baseball as such didn't constitute interstate commerce, so it was immune from antitrust laws. Now some congressmen feel that broadcasts have changed the situation.

• **What Outcome?**—At this point, no one can guess how all this TV-sport turmoil will turn out. And that's because no one knows, for sure, just how bad an effect TV has had on the promoter's purse—or whether that effect will be permanent. But if gates do continue to drop (and not all of them are dropping even now, incidentally), sports promoters will be in a mood to do something drastic. When that time comes, they won't waste any sympathy on the man who right now is enjoying sports free in his own living room over a cold glass of beer.



# Congress Faces Deadline

A dozen major bills need action by June 30. Chances are existing laws will get temporary extensions, leaving more time for maneuvers and debates on the final products.

Housewives weren't the only ones who let their chores go during the Kefauver hearings. Congress will have to do some fancy maneuvering these next few weeks to get swept out under the carpet. There are a dozen really weighty bills on deadline or long overdue.

The result is that you'll see some midnight legislating and some quickie extensions of existing laws and agency authority to keep the wheels of government and our military programs from coming to a full stop. On the must list are the Defense Production Act, most of the big appropriation bills, and rent controls. Congress has to act on these by June 30.

• **Extensions**—Based on the record, you'd guess that it would take at least a couple months to get all this to the President. Congress can put off meeting the deadlines by temporary extensions.

The reason Congress has gotten itself into one of the worst log-jams ever is fairly clear: There are big issues to face, but no leadership strong enough to lead.

Truman's influence is at a very low ebb. Democratic leaders can't control their own members. Republicans are just as split.

About the only sure thing in Congress is this: The Republican-Southern Democrat coalition can take over anytime it wants to. It can't pass its own laws, but it can tag anti-Administration amendments on bills that must be passed, and it can stop any proposal dead in its tracks.

Congressmen discovered early this year that in this situation you make the most political hay with an investigation. The Kefauver, Fulbright, and MacArthur hearings have been the high spots of the first six months. Senators and Congressmen have neglected legislative chores to spend their time on these and a dozen other investigations.

Here's a quick rundown of the major legislation now in the hopper:

**Controls**—Both House and Senate banking committees are trying to rush bills through to meet the June 30 deadline. But the only chance for this is to strong-arm through an extension of the present law—without Administration amendments and with no weakening of price-wage controls as sought by farm and business groups.

Republican leaders favor an extension, "to give us a better picture on whether the situation really demands

all the controls Truman wants." Best guess at this time: a 60-day or 90-day extension while Congress debates the final bill. Whatever the outcome, Congress won't accept most of the amendments Truman sought.

**Rent control**—Congress will extend the present law again, probably with a provision giving the Defense Dept. authority to designate critical housing areas for military personnel to which federal rent controls can then be applied. Hearings on revival of wartime rent control authority will come at a later date.

**Appropriations**—Up to the first of June, only five of the dozen big 1952 appropriation bills had passed the House; none had even been reported out of committee for the Senate to vote on. This week the Senate began debating the Labor-Federal Security appropriations. At midweek the Independent Offices bill was hitting snags, and the Interior Dept. funds were about ready for the Senate.

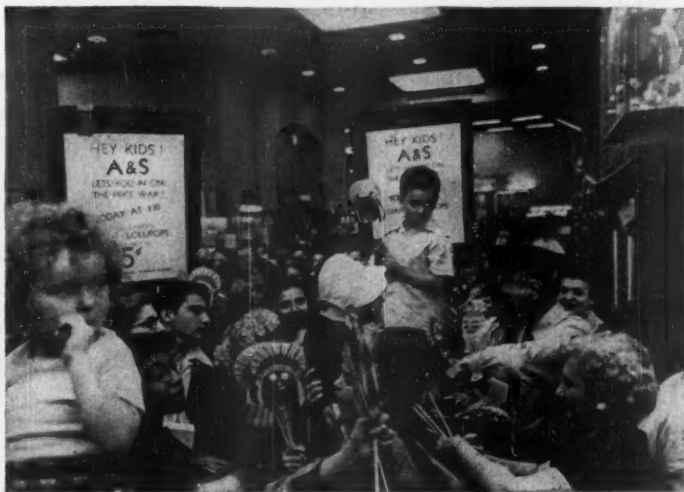
That leaves still to be passed in the

next couple weeks such big bills as Agriculture, Army civil functions, State, Justice, Commerce, Judiciary, Treasury, and Post Office. These agencies will be authorized to pay their employees and continue permanent programs. But they won't be able to hire new people or start on new expansion programs.

Not included in this list are two whoppers—the \$60-billion military money for next fiscal year and the \$8.5-billion foreign aid bill. Truman was way late getting these to Congress, and they've been completely sidetracked while the bills in the works go ahead.

**Taxes**—The date of final action on the new tax bill keeps sliding further into the future. Sen. George had figured his committee would have the tax bill from the House by this week. But at midweek the House Ways & Means Committee was still taking final votes. Still the best guess for effective dates of the new taxes—but not so good a guess as it once was—is this: Oct. 1 for personal income taxes, July 1 for corporations. Size of the bill: still around \$7-billion total, compared to the \$10-billion "first bite" on a \$16-billion revenue-raiser Truman originally asked.

One spur to speed will sharpen as Washington's famed heat and humidity keep rising. That's the congressional recess that leaders of both parties are planning for sometime during August and September.



## Price War Spreads—Into Lollipops

"The price war," says an official of Brooklyn's Abraham & Straus, "was getting too grim. It needed a little humor." To add the missing element, A&S last week slashed its 15¢ lollipops to 5¢, sold out its entire stock of 3,000 in 25 wild minutes. Meanwhile, the price war in New York, after a pause

for restocking, spread to new items. By this week Macy's had added another 2,100 fair-traded goods to the 6,000 on which it had originally cut prices. But despite zooming department store sales in New York (up 18% last week over 1950), price wars have broken out only sporadically elsewhere.

# Autos Reach the Downgrade

High levels of production and employment are starting to sag as materials allocations and a falloff in demand take their toll. Shutdowns and layoffs spread across the industry.

Automobile production, weighted by slowly falling demand and the pressure of materials allocations, is beginning to sag downward.

Measured by past yardsticks, output is still very high. In May some 681,000 cars and trucks were produced in all U.S. and Canadian plants, according to Ward's Reports. That's right in line with this year's monthly average, which brought a total of 3,477,000 completions by June 1.

From here on, though, volume will move downward. June's total will likely be below 650,000. For July, August, and September, manufacturing can be expected to average no better than 600,000 assemblies a month, maybe less.

• **Cutbacks**—In general, material allocations follow the pattern of the cutbacks ordered just before World War II—they bear heavier on the bigger companies than on the smaller ones.

General Motors, for example, has been building close to 45% of the industry's total during the past two years. Now it is reduced to a quota of 41.35% by the figures set up by National Production Authority.

Military contracts awarded the vari-

ous auto companies will not at all take up the slack. Only a very few of these orders are at the point of production today, and none is comparable in size to car and truck assembly. It will be early 1952 before the military jobs get going in a big way.

• **Layoffs**—As a result, industrywide layoffs seem unavoidable. Some companies have already started. Kaiser-Frazer has furloughed large numbers of both hourly and salaried people, some indefinitely. Hudson had a shutdown recently of nearly a fortnight.

General Motors has curtailed work at scattered points and will use up a big share of its cutback during the first week in August, when all its Michigan auto plants will shut down. GM feeder plants and others will close for about a week at other times, cushioning the effect, in part, by inventory-taking.

Ford expects to have to lay off about 10,000 of its 144,000 people by mid-July. Chrysler may not be hit so hard; NPA has sweetened up its allocations to take account of the fact that Chrysler was tied up by strikes during much of its 1950 base period. Still, the company has lost time and production re-

cently—though from strikes again, not material shortages.

• **Employment Dropping**—Underlying these irregular layoffs is the unquestioned fact that total auto industry employment is heading down. Dept. of Labor estimated auto industry employment last February at 931,400 men and women—well above the 1950 average of 839,400. Today the figure has been reduced somewhat, and by August it may be down to the 1950 average or lower.

This is partly confirmed by Detroit area employment figures. The Board of Commerce Index figure for mid-May (prior to the Hudson shutdown) indicated employment of around 547,000 industrial plant workers. Six weeks earlier, at the end of March, it reached a spring peak equaling about 565,000. By the end of May, with the Hudson fortnight's closing and other layoffs figured in, a preliminary index estimate indicated about 525,000 on the job.

• **Not Concerned**—Washington so far has taken the news of the employment dip without batting an eye. Its figures show that unemployment stemming from conversion or materials shortages is surprisingly small. Further, there's every indication that laid-off workers are getting other jobs quickly.

The explanation, Washington feels, lies in the way defense orders have fanned out in the area. Although many of the prime contractors are still months off from production, they have already passed on subcontracts to get their supply lines started. The laid-off worker usually finds a new spot—if he wants one—with one of the subcontracting companies.

• **Demand Falls Off**—For their part, auto men privately agree that cutbacks in output had to come—if only because of the size of field supplies. Car prices are being discounted almost everywhere (BW—Jun. 2 '51, p. 25). One big factor in the sales slowdown has been the reluctance of year-by-year car buyers (who account for roughly a third of the total market) to buy new cars as long as the trade-in prices for their old ones are so weak.

Normally a new car depreciates from one-fourth to one-third in its first year's operation. Today's "popular price" car delivers at around \$1,700; the next range runs \$2,000 or more. That means the owner of a 1950 model, shopping for a new car, finds that he must swallow a devaluation of at least \$500 on the car he is driving and, in many cases, pay a higher price for a 1951 than his 1950 cost him. He keeps on driving the 1950.

• **Blessing in Disguise**—If the consumer keeps up his indifference, the cutback to 1.2-million cars in the third quarter may look like a blessing in disguise. There will be no threat of an inflation-producing scarcity of cars.



## Big Enough for One, Cheap Enough for All

This midget-sized German single-seater auto has a top speed of 50 mph., averages 70 miles to a gallon of gas. Egon Bruetsch, the Stuttgart racing driver who designed it,

says its centrifugal clutch eliminates the gear shift and makes it ideal for use by amputees. Bruetsch figures the half-pint model will sell for about \$450.



## Dings Lifting Magnet

Operated by Allen-Bradley Control Panel

This control panel was especially designed by Allen-Bradley to provide faster operation and maximum performance of the Dings Lifting Magnet used for almost every type of material handling in scrap yards, factories, and mills.

Allen-Bradley motor controls are renowned throughout industry for their reliable performance. The simple design and rugged construction assure millions of trouble free operations. Unit construction... metal base plate... front of panel wiring... enclosed contacts make Allen-Bradley solenoid starters ideal for "built in" control panels. Consult with Allen-Bradley, today.

Allen-Bradley Co., 1332 S. Second St., Milwaukee 4, Wis.



Allen-Bradley Drum Switch used in conjunction with the above control panel.



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## SOLENOID MOTOR CONTROL

QUALITY

## Points the finger at Hidden fires...



Slow-burning fires may smolder for hours before they generate enough heat to set off fire detecting devices. But they can be spotted within a few seconds by a Kidde smoke detecting system.

A single Kidde Multi-line Smoke Detector System can protect one room or many rooms in the same building. A central electronic control board tells the exact location of the fire—and transmits a warning to your fire control headquarters or the local fire department.

You can combine this efficient Kidde Smoke Detector System with a Kidde CO<sub>2</sub> Fire Extinguishing System. See your nearest Kidde representative or write for full information.

**Walter Kidde & Company, Inc.**

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# Kidde

## BUSINESS BRIEFS

**Ownership of Tide**, the 21-year-old weekly advertising news magazine, changed hands through a stock trade. The new owner: Magazines of Industry, Inc., New York, publisher of Modern Industry. Tide continues on its own, editorially.

**Bethlehem Steel** signed a contract with Hanna Coal & Ore Corp. for purchase of more than 30-million tons of Labrador-Quebec iron ore over a 25-year period. Delivery at Seven Islands on the St. Lawrence River is expected to start late in 1954. Price is undisclosed.

**Airlines set a safety record** in 1950 with only 1.1 passenger deaths per 100-million passenger-miles of domestic flying. The National Safety Council lauded 42 carriers for completing their year's schedule without one fatality.

**A Queens druggist** won a temporary injunction to stop Macy's from price-cutting 10 drug items made in New York. This is the first court test of just how far the recent Supreme Court decision on fair trade applies to intrastate commerce.

**Coal's seasonal slump**, longer than usual this year, has idled more than half of Pennsylvania's 85,000 soft coal miners, closed 21 mines in Illinois, hit areas in Kentucky and Ohio. Consumers hold stocks of about 75-million tons of coal today, compared with only 40-million tons a year ago.

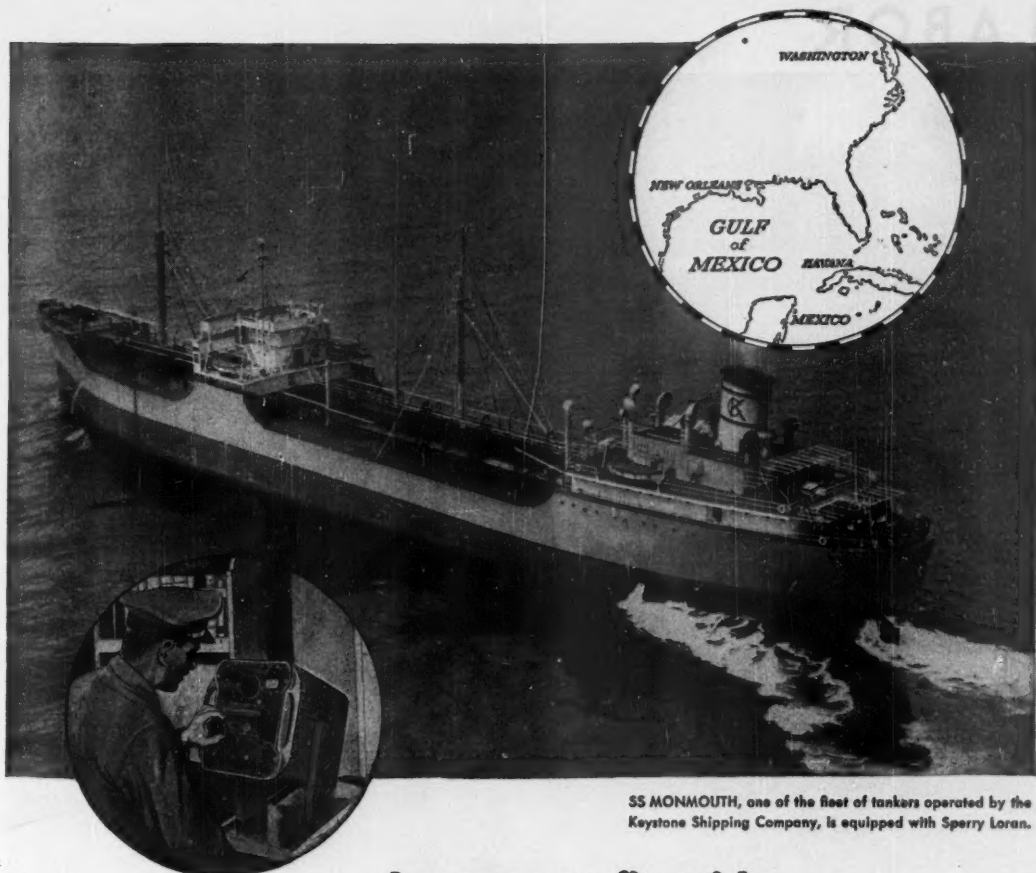
**Buick will build** another plant at Flint, Mich., to produce Wright J-65 Sapphire jet engines. That makes two plants in Flint, one near Chicago.

**California vs. Florida:** With its new line of Sunkist concentrates, California Fruit Growers' Exchange is making a bid for the frozen citrus juice market—now dominated by Florida growers. John I. Moore resigned last week as president of Clinton Foods' Snow Crop Division to put together a new distribution setup for Sunkist called Marketers, Inc.

**Carpet prices fall 5%** on 12 out of the 15 lines of Alexander Smith, Inc., starting June 18. The company also set prices 5% below the federal ceiling on five new lines of rayon-wool carpets.

**A Geiger counter** will be standard equipment on all Chicago & North Western Ry. trains from now on. The road will use the instruments to search for possible sources of uranium and other radioactive minerals along its right-of-way.





SS MONMOUTH, one of the fleet of tankers operated by the Keystone Shipping Company, is equipped with Sperry Loran.

## Increase profits with **LORAN** navigation of Gulf Stream

To realize profits in getting oil products from Gulf ports to the user with more speed and with less operating cost, many companies are equipping their entire fleets with Sperry Loran.

► By taking frequent Sperry Loran "fixes" on the northbound passage, tanker captains can detect the position of the Gulf Stream's fastest currents and thus take full advantage of them. On the southbound passage courses can be selected to avoid these

currents. This enables a vessel under favorable conditions to increase its speed, saving hours of running time on every trip.

► Surveys made by leading tanker operators and Sperry in studying the Gulf Stream's current strength and variations with Sperry Loran have resulted in this entirely new method

of navigating the Stream.

► Three new loran stations in the Gulf of Mexico . . . integrated with the Atlantic Coast loran chain . . . give navigators improved coverage in this area. With Sperry's Direct-Reading Loran, accurate fixes up to 650 miles by day and 1400 miles at night can be obtained from these stations.

# SPERRY

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# LABOR



**LIFE IN THE NEEDLE TRADES** is hectic and strenuous for both union officials (left) and employer. But ILGWU arranged to have . . .

## Labor Relations Take a Holiday

Ulcers are the occupational hazard of both employers and union officials in the ladies' garment industry. It's that kind of business: fast, furious, and frenzied. Like this week, when a row about contract terms flared up overnight into the industry's first work stoppage in New York in 25 years. So when those in the industry do relax, even relaxation becomes intense.

For the last 20 years and more, the International Ladies' Garment Workers Union has been developing and improving 1,000 acres of land it owns in the Pocono hills of Eastern Pennsylvania. There it has built a magnificent summer resort for vacationing members, which it calls Unity House.

• **Early Start**—This year the ILGWU opened the season at Unity House a week early. President David Dubinsky

personally invited 550 manufacturers, with whom the union holds contracts, and their wives to be the union's guests for a weekend.

They all came. Everything was free—the high-class, expensive Broadway entertainment, the excellent food, the deluxe accommodations, the bar. The only way a guest could spend any money was in poker, pinochle, canasta, or gin rummy. The party cost ILGWU around \$20,000.

• **Return**—What did it get for its money? The union counted on a three-fold return: A friendlier relationship with its employers; an added measure of respect for the union as a strong, wealthy, and benevolent institution; and a closer acquaintanceship between the union's top brass—which was all there—and leaders in the industry. These

are the things that have kept peace in the industry for so long and that employers and union counted on to settle this week's strike.

To see what an employer signed up for when he accepted Dubinsky's invitation, **BUSINESS WEEK's** camera went along for the weekend with Monroe M. Messing and his wife. Messing is president of the Manhattan Undergarment Co., Inc., employer of 250 ILGWU members in New York City.

On a Friday morning, **BUSINESS WEEK** met Messing a few hours before he was scheduled to leave for Unity. He was involved in some not extraordinary business: an argument with an ILGWU representative over piece rates for a slip he manufactures.

For what happened after that, **TURN TO PAGE 32.**



## Serves the Electric Motor User in Two Important Ways:

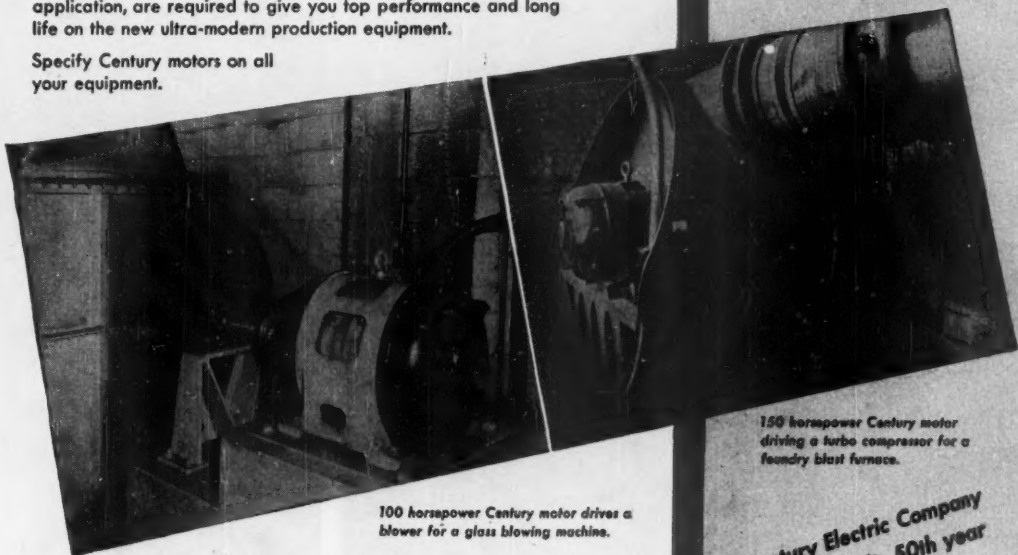
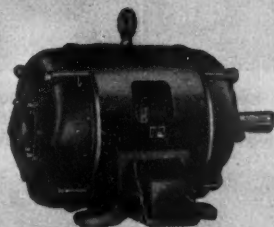
1. Century motors are designed and constructed for a long, dependable operating life.
2. Just as important—they are skillfully selected to match the operating characteristics of the many kinds of equipment they drive.

**I**N CENTURY'S wide range of types and sizes (up to 400 H.P.) there are available: 4 standard classes of starting torque characteristics—6 methods of speed control—constant and short time ratings—4 basic classes of frame protection against atmospheric hazards—a dozen methods of mounting the motor to the equipment—plus many special specifications to meet the requirements of the BIG NAME equipment manufacturers who use Century motors as a component part of their equipment.

Teamwork with equipment producers gives you skillfully selected motors from Century's wide range of types and sizes... properly applied to match the performance characteristics of the machines they drive.

Both a properly designed and constructed motor, plus skillful application, are required to give you top performance and long life on the new ultra-modern production equipment.

Specify Century motors on all your equipment.



100 horsepower Century motor drives a blower for a glass blowing machine.

150 horsepower Century motor driving a turbo compressor for a foundry blast furnace.

### *Century* SERVICE Is Near Any **CENTURY** Motor Driven Equipment

Prompt Service is offered by CENTURY'S National Network of more than 200 Authorized Service Stations, supervised by 28 Century Sales offices.

1. Facilities for immediate exchange of most CENTURY standard ratings of standard construction are available at CENTURY Authorized Service Stations.
2. CENTURY Authorized Service Stations are qualified and equipped to service and repair any piece of CENTURY apparatus.
3. Genuine CENTURY renewal parts are available at CENTURY Service Stations, CENTURY Parts Distributors and at the factory in St. Louis.

Century Electric Company  
is celebrating its 50th year  
in the electrical industry

### **CENTURY ELECTRIC CO.**

1806 Pine St. • St. Louis 3, Missouri

Offices and Stock Points  
in Principal Cities





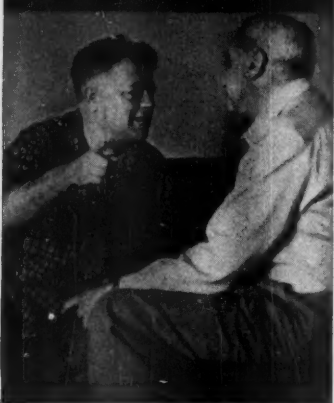
**2** Employer Messing, jamming a bundle of unfinished work into briefcase, rushes to meet his wife and start the weekend.



**3** With Mrs. Messing's help, he checks road directions provided by the union before starting the 100-mile drive from New York City to ILGWU Unity House at Forest Park, Pa. Messing drives a Buick, made the trip in three hours.



**4** Checked in at Unity, Messing runs into a competitor as he goes outside to absorb fresh air and scenery. He remembers some unfinished business and gets involved in an earnest discussion of marketing problems for his fall line—now well under way in his New York shop.



**5** He finds ILGWU president David Dubinsky, and the two sit down under a famous Diego Rivera mural, which both ignore. It's an argument over union policy.





**6** He joins a gin rummy game with ILGWU vice-president Louis Stulberg, who heads the union division that takes in Messing's company. "I made a few bucks," Messing said afterwards,



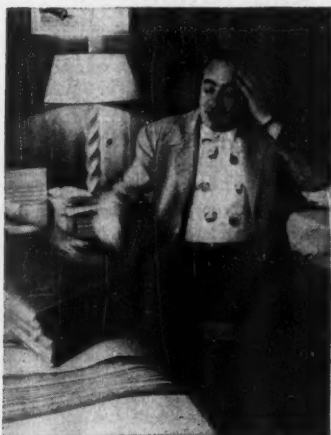
**7** Meanwhile, Dubinsky, overseeing every detail, is in the kitchen. Everything must be just right. They say at Unity that the chefs go to a sanitarium after every Dubinsky visit.



**8** At dinner, Mr. and Mrs. Messing meet union official Harry Crone (right), who wanted to be sure everything was satisfactory. At least one union officer was seated at each table.



**9** Dubinsky does some table-hopping to see that all the guests are taken care of. Weekend had a western theme, "Hi 'ya, Podner" slogan. Hence the sheriff's badge on Dubinsky's lapel.



**10** Late Sunday afternoon, packing for the return trip, Messing finds his unopened briefcase. "Oh well, it's too late to do anything about it now."



**11** Back in his office Monday morning, the union representative is waiting for Messing. "Now about those piece rates we were talking about," he says. "Oh, for Pete's sake, go away," Messing yells. "Give me a little time to rest up from the Unity House weekend. Come back tomorrow."



## How to keep HIM out of your one-man business

YOUR ONE-MAN business may be profitable, but its good condition today doesn't make it auction-proof.

*Cold statistics show that 4 out of 5 one-man businesses fail to survive the critical period following an owner's death.*

And the big reason the auctioneer moves in—to get what he can for the heirs—is lack of cash to meet immediate expenses.

Accounts receivable fail to produce enough cash promptly at such a time because some customers, no longer interested in keeping their credit good, are slow to pay. And of course, some business is lost to competition the minute management is changed.

But rent, wages, taxes, and accounts payable can't be put off.

As assets shrink and liabilities build up, the one-man business usually must be sold **UNLESS—Insurance on**

*the owner's life furnishes money needed to carry on.*

Through Travelers Business Life Insurance, you can make sure that an auctioneer will never have to sell your business. Such insurance will furnish the ready cash your heirs need—when it's needed most. And your business will have the best possible chance to keep on earning an income for your family and your associates.

Ask your Travelers agent or broker to tell you more about Travelers Business Life Insurance and the security it provides for the one-man business.

MORAL: INSURE IN *The Travelers*

ALL FORMS OF INSURANCE AND SURETY BONDS

The Travelers Insurance Company, The Travelers Indemnity Company, The Travelers Fire Insurance Company, The Charter Oak Fire Insurance Company, Hartford 15, Connecticut. Serving the insurance public in the United States since 1864 and in Canada since 1865.

## Home Run for IUE

Contract extension and modified union-shop clause at Westinghouse put IUE one up over its deadly rival UE.

Westinghouse Electric Corp. has decided to stand pat with its contract relations with the International Union of Electrical Workers (CIO) and to sidetrack the United Electrical Workers (ex-CIO).

That's the significance of Westinghouse's settlement last week after heated bargaining with IUE. The final terms give IUE an important advantage over rival, leftist UE in their bitter running fight. They provide for a one-year extension of IUE's contract (to Oct. 1, 1952) and a modified union shop.

Strategically, these are more important to IUE right now than the wage increase it signed for: 9¢ an hour, provided the Wage Stabilization Board approves that much (page 19) and the Office of Price Stabilization will O.K. price boosts based on the 9¢ hike.

• **Aimed at Election?**—The one-year extension of the contract gives IUE a strong new argument to use against holding another NLRB poll this year at the big East Pittsburgh works where it is now established. UE is petitioning for a National Labor Relations Board election at East Pittsburgh. The left-wing union claims it now represents a majority of the 13,000 employees there. Last year the plant went to IUE by a 200-vote margin (BW—May 26 '51, p. 40).

In the past, NLRB has generally dismissed an election petition wherever a contract extension has been agreed on "within the certification year." The Westinghouse-IUE extension meets that requirement; the "certification year" at East Pittsburgh ended June 13, 10 days after the extension agreement.

Aware of that, UE hurried to charge "direct collusion" between IUE and Westinghouse "to escape from an NLRB election." It asked NLRB to disregard the contract extension.

• **Chance to Consolidate**—The modified union-shop clause agreed to by Westinghouse also hit hard at UE. It gives IUE a chance to consolidate its position in plants where it holds contracts.

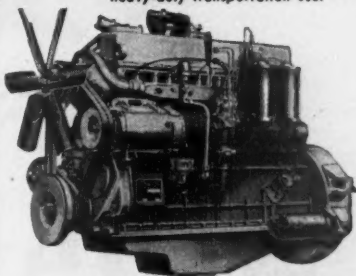
The clause is similar to that in effect between General Motors and CIO's United Auto Workers. It provides that: (1) New employees, rehires, and transfers must join IUE within 45 days after going on the Westinghouse payroll; (2) old employees who already are members of IUE must retain their memberships for the duration of the contract; but (3) old employees who are

**LOOK WELL TO THE ENGINE  
... IT'S THE HEART  
OF THE MACHINE**

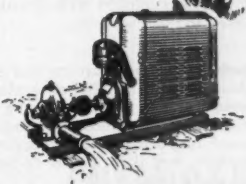


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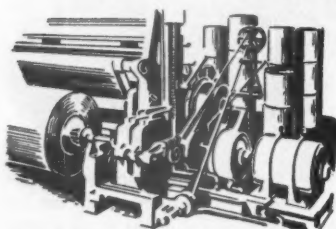
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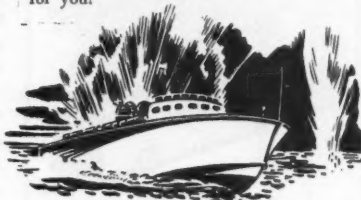
Paper machinery faces these needs: adjustable speed to suit humidity and paper thickness; smooth starting to prevent tearing; no-load starting to keep power costs low. American Blower Gyrol Fluid Drives meet these needs in every respect for a Jacksonville paper company as well as other prominent manufacturers. The complete simplicity of Gyrol Fluid Drive is a great advantage. Speed control is flexible, and the unit is easy to operate.



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not already members of IUE needn't join the union unless they want to.

• **Buildup for IUE**—Unquestionably, the clause will help IUE build up its strength in Westinghouse. The union's fiery young president, James B. Carey, hailed it as the "beginning of the end of UE in Westinghouse."

The union-shop clause won't cover East Pittsburgh workers right away. It can only go into effect where workers have authorized a union-shop clause in an NLRB election. None has been held yet at East Pittsburgh. IUE announced it will ask for one if the board turns down UE's representation election petition.

• **A Surprise**—Westinghouse's acceptance of a union-shop clause in its IUE contract came somewhat as a surprise in the electrical-manufacturing industry. The corporation hasn't been at all happy in its relations with IUE.

It complained, in April, about its concern over "IUE wildcat strikes." At the time, it said work had been hampered at IUE plants by 88 stoppages last year, 33 in the first four months of 1951 (BW—Apr. 21 '51, p.33).

Before Westinghouse signed last week, top management officials held a closed meeting with Carey and CIO president Philip Murray. Word is that they discussed Westinghouse's irritation over IUE "irresponsibility"—and got assurances from the union leaders that a contract extension and modified union-shop clause would pave the way for more stability in labor relations.

## Million Due to Collect 4¢ Productivity Raises

Over 1-million workers will get "productivity" raises this year—now that the Wage Stabilization Board has approved them in principle (page 19).

The Bureau of Labor Statistics checked 188 major labor contracts covering 5-million workers earlier this year (BW—May 19 '51, p.37). It found that 15%—or about 750,000—of the workers checked were covered by deferred-wage-increase clauses.

• **More Pay**—With few exceptions, these workers will get 4¢ raises. The effective date will vary, with most increases due this month and in August and September. BLS' survey covered only plants employing 5,000 or more persons. Since the United Auto Workers (CIO) and other unions have deferred-raise clauses at many smaller plants, it's safe to figure that up to a half-million other workers will also get productivity raises.

UAW this week estimated its members alone will collect \$80-million more pay annually as a result of WSB's productivity raise order.



(ADVERTISEMENT)

## THE 1951 CROP AND THE OIL SEED PROCESSOR

JUST how does the outlook for this year's oil seed crop affect the oil seed processor? With the Government encouraging increased cottonseed acreage, there is some indication that the combined soybean-cottonseed acreage this year will be the biggest in history. With a normal growing season, it is predicted that the 1951 domestic oil seed crop will be the biggest ever harvested.

This does not necessarily mean a long and profitable operation for processors generally. The war and the heavy armament program, together with a more favorable world wide dollar balance and continuation of the ECA program, will tend to force seed prices upward. These same factors are tending to force labor prices upward, as well as to syphon off at least a portion of the rural labor supply normally available to the oil mill operators.

The net result to the oil mill operator generally is believed to be a more abundant supply of seed, increased seed and operating costs, increased spread between oil and meal, and possibly decreased margin for conversion of seed to oil and meal.

This situation is favorable for investment in a solvent extraction system. Such an investment reduces labor requirement, particularly if it retires a hydraulic mill—in many cases the saving in labor cost alone will justify the capital cost. At the same time, it increases oil yield by 30 to 40 pounds per ton of seed, decreases repair costs, improves yields and plant efficiency generally. The following are typical for a 200-tons-per-day plant, operated on soybeans and on cottonseed:

|                 | Cottonseed     | Soybeans       |
|-----------------|----------------|----------------|
| Capacity        | 200            | 200            |
| Residual Oil    | .5             | .4             |
| Solvent Loss    | 5 lbs./ton     | 6 lbs./ton     |
| Steam           | 6,000 lbs./hr. | 7,800 lbs./hr. |
| Electric Power  | 200 kw./hr.    | 225 kw./hr.    |
| Cooling Water   |                |                |
| Make-Up         | 20 gpm         | 25 gpm         |
| Operating Labor | 2 men/shift    | 2 men/shift    |

Prompt action is required by any firm desiring a solvent plant for operation on the 1951 crop. By placing an order for a complete "turnkey" plant immediately with Chemical Plants Division, Blaw-Knox Construction Company, assigning this experienced organization the responsibility for engineering, design, procurement, and construction, a processor can have his plant in operation in a minimum of time. If expected conditions materialize, operations from this one season could assist materially in the write-off of the initial cost.

We urge you to write us at one of our offices listed in the adjoining advertisement. The opportunity for a favorable return from prompt action has seldom been better.

*The majority of all U.S. Soybean extraction plants contracted for since 1947 were designed, built and equipped by Chemical Plants Division . . . . .*

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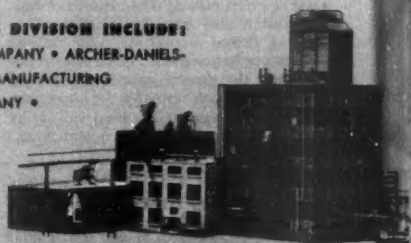
For the answer, just refer to plant performance data. In every instance, Blaw-Knox-

built and equipped extraction plants have exceeded performance guarantees in every category... assuring more profit per dollar invested and per ton processed. Why settle for less? Glad to consult with you now concerning future plans.



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Courtesy Schaffer Stores, N. Y.  
The CRYOVAC process moves into the super-market, vacuum-sealing by assembly line methods

## MEAT PRE-PACKED

... grocers wrap it days ahead for Saturday

A SIGNIFICANT TREND in food store operation adapts production line technique to set before the self-service customer better-looking, better-tasting packages of frozen or processed meats and poultry.

Chain owners use Dewey and Almy's CRYOVAC process to produce a steady flow of vacuum-sealed packages in central plants serving many stores. Twice a week they ship in skin-tight, high visibility CRY-O-RAP bags, ready for display. One-store grocers pre-pack during slack selling periods to take care of the heavy week-end volume.

The once-a-week shopper is assured of original quality by CRY-O-RAP bags, made of a special Dewey and Almy—Dow Saran. They hold natural juices and color inside for a longer time, and they keep out oxygen and other causes of contamination and spoilage. Shrunk-on to form a virtual second skin, the unique CRY-O-RAP bag provides important economies for the grocer, makes storage and meal preparation easier for the housewife.

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San Leandro Montreal  
Cedar Rapids Buenos Aires

## A-C Backs Union

And it pays. Company plan to make workers more active in local results in block-out of Communists.

This week in the big Milwaukee plant of Allis-Chalmers, electioneering started for delegates on the bargaining committee of Local 248 of the United Auto Workers (CIO). Though the same thing is going on in many plants under contract to UAW, it's a pretty safe prediction that no other plant will involve a larger number of voters.

In a contract that went into effect last July (BW-Jul.15'50,p88), Allis-Chalmers got UAW to accept what it calls a "democratic processes" clause. This clause provides that elections for union office shall be held on company time and on company premises—without loss of pay. It also provides that should a strike vote be taken it, too, will be held on company property during working hours. The contract and the clause run until 1955.

• **Communists Ousted**—From the thirties, when A-C was organized by CIO, until 1949, the company's labor relations were embittered by dealings with a Communist-led local union. The Communists were able to control Local 248, the company believed, because only a small minority of its employees participated in union affairs.

When joint efforts of the company and the parent UAW succeeded in purging Local 248 of its Communist leadership, Allis-Chalmers wanted to be certain that the Communists would never make a comeback. The best insurance against this, A-C decided, was full participation by its employees in union affairs.

• **Results**—So far there have been three elections under the contract: One selected delegates to the UAW convention; the second picked officers for Local 248; the third elected members of the local's bargaining committee. According to Charles Schultz, president of Local 248, 85% of A-C's employees participated in the elections. Union figures show that this is about a 50% improvement over the previous system, which provided for elections to be held at union meetings off company property. Schultz says that the new system has also raised attendance at meetings and made members more willing to take part in union activities.

Since the new system went into effect, the Communists have not felt strong enough to put up election slates of their own.

• **Union Fears A-C Domination**—The union expresses only one reservation

about the present system. It professes to fear that the company might try to dominate elections. It admits, however, that so far there's no basis for any such worries.

From the company point of view, the democratic processes clause is doing the job intended. E. F. Ohrmann, who manages the labor relations department of Allis-Chalmers, is convinced it has blocked out subversive minority groups who would like to take over the local union again.



PERSONNEL EXPERT James P. Mitchell heads special Hoover Report committee.

## Citizens Drive For Federal Job Reform

Almost everybody seems to agree that something should be done about personnel policies covering 2.3-million federal workers. There's endless evidence of red tape, useless and duplicated work, and other evils. The bipartisan Hoover Commission pointed them out—and suggested improvements. But, so far, not many have been made.

Last week the Citizens Committee for the Hoover Report set out to revive interest in policy reforms. It named a Special Commission of Federal Personnel Policy, with James P. Mitchell of New York as chairman. The new group will "work to bring about public and congressional recognitions of the need for modernizing federal personnel policies along lines proposed by the Hoover Commission."

Mitchell, now vice-president of Bloomingdale Bros., Inc., New York department store, was on the "task force" that shaped the Hoover Commission report on federal personnel policies. He also served during World War II as a personnel officer in the War Dept. and with the War Manpower Commission.

## Kefauver Legacy

**UAW opens new drive at Detroit-Michigan Stove, named in crime committee hearings. Police go on alert.**

United Auto Workers (CIO) organizers opened a new drive for members at the Detroit-Michigan Stove Co. this week—and Detroit police kept a close watch on developments. While everything looked peaceful enough, they knew the company as one of two in the area that got special attention from the Kefauver crime-investigating committee a few months ago.

• **Strikebreaking Charged**—In particular, Kefauver testimony had charged Detroit-Michigan Stove with strikebreaking tactics during an earlier UAW organizing drive, in the 1930's. Witnesses linked the tactics to a scrap-metal contract awarded to Santos Perrone, Prohibition-era bootlegger (BW—Mar. 24 '51, p133).

UAW charged specifically at committee hearings that Perrone got the scrap contract—although his bid wasn't "anywhere near the current scrap price" in Detroit—for "strikebreaking services" to end its earlier drive.

This time Perrone watched the leaflet distribution by UAW organizers from his gas station across from the plant gates. The initial phase of the UAW's second drive was orderly; police stood by anyway, determined to keep things that way.

• **UAW Confident**—Emil Mazey, UAW secretary-treasurer, set off the new drive with a cocky prediction: "This time the union is going to stay at Detroit-Michigan Stove." Renewing the charges of past "intimidation and coercion" by the company, he promised that "workers who choose to join the union [will be] fully protected." He said Detroit's Police Commissioner George Boos had been alerted and had assigned a special squad to the plant areas.

The company retorted at once to what it called UAW's "false propaganda" campaign. John A. Fry, Detroit-Michigan Stove president, denied that the company has any anti-union aims. He pointed out that it has a 50-year-old contract, covering part of its 1,100 employees, with the Moulders & Foundry Workers Union (AFL).

• **Charges Filed**—Meanwhile, UAW has filed unfair-labor-practice charges against both Detroit-Michigan Stove and Briggs Mfg. Co.—also named in the Kefauver committee hearings. Both complaints, to the National Labor Relations Board, cited the testimony before the crime committee and alleged

illegal interference with the rights of workers "from 1935 . . . to the date of this charge."

Mazey took personal command of the NLRB fight against Briggs. Always a thorn in the side of the company (the UAW's dapper secretary-treasurer came from the ranks of Briggs Local 212), he has missed few chances of a scrap with Briggs.

• **Needling**—In addition to NLRB charges, Mazey used other annoyance-value tactics against the company. He inserted financial-section ads in New York, Detroit, and Washington newspapers last month, to call the attention of Briggs stockholders to Kefauver committee testimony about the company. Later in the month, he attended the annual Briggs stockholders' meeting (UAW owns stock in all the major companies where it has locals) and urged the removal of Briggs' president, W. Dean Robinson. But he stood alone; other stockholders weren't moved by his charges of incompetence.

Ironically, even UAW's vote was cast for Robinson's reelection. Not so well versed in corporate practices as professional stockholder-dissenters need be, Mazey had signed a proxy. That enabled corporate officers to cast UAW's vote in favor of Robinson and supporting officers.

## Movie Salesmen Eye UMW's District 50

Motion picture salesmen employed by major film distributors are about to give up the independence—but not the fancy name—of their union, The Colosseum of Motion Picture Salesmen.

• **Salary Raise**—The Colosseum is a full-fledged union with more than 1,000 members in "loges" (locals) across the country. Right now, it's having trouble negotiating a new salary clause with employers. The union rejected an offer of a blanket \$4-a-week raise as "inadequate" due to recent cost-of-living rises. Employers wouldn't go higher. Bargaining bogged down.

The Colosseum ran into similar difficulties in bargaining 18 months ago—but finally settled for a \$10 raise (BW—Dec. 10 '49, p95). This time, Colosseum officers decided their union might be too small and too weak, financially, for really strong bargaining. They started looking about for a suitable major union affiliation.

• **Catchall District**—John L. Lewis' catchall District 50 opened negotiations with Colosseum officers—offering strong bargaining support and a certain amount of autonomy for the salesmen's union. Last week representatives of the two groups were busy with details of an affiliation.

## WHICH WILL IT BE ...



## A LITTLE MORE NOW?

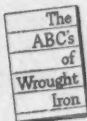


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## A LOT MORE LATER?

Here's something it's well to remember about the *kind* of pipe you buy for your buildings. You pay only the pipe fitters charge to *install* it . . . but you pay pipe fitter, carpenter, plasterer, mason and painter every time you *repair* it. The little extra you pay for Byers genuine wrought iron pipe is generally a highly profitable investment. That's why Byers Wrought Iron pipe is chosen for corrosive services. Maintenance departments know that the pipe that lasts the longest costs the least.

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Working with SHOPSMITH works wonders. It smooths furrowed brows. Routs worries. Squares away tangled thoughts in jig time. Magna Engineering Corp. has built into SHOPSMITH all the woodworking skill you thought you lacked; has done it by ingenious design and precision construction.

Accuracy is born and bred in SHOPSMITH. Every moving part is machined to watchmakers' tolerances (.0002" at the spindle tip, for example). Every tool is tested for spindle runout (.0015" max.). Castings are bored simultaneously and adjustable parts are factory set to assure perfect alignment right from the start.

The complete SHOPSMITH unit—8" circular saw, 12" disc sander, 33" wood lathe and 15" vertical and horizontal drill presses—occupies only 2' x 5', costs only \$189.50 (without motor). See SHOPSMITH demonstrated at leading hardware, department or Montgomery Ward stores. And write for the 16-page SHOPSMITH catalog.



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## LABOR BRIEFS

Industry's lures accounted for 38% of a 4,000-worker decline in Vermont farm hands in the last year. About 22% went into military service; most of the remainder left the work force entirely or left the state. Figures are from a state agricultural worker survey.

Scholarship awards to General Electric employees or their children will total 59, valued at \$16,275, for the 1951-1952 school year. Since 1924 GE's grants to 948 employees or employees' children amounted to \$238,113.

Manpower needs of the Bankers Trust Co., in New York, were a factor in its recent decision to take over the Commercial Bank & Trust Co. Bankers Trust, worried over a growing shortage of trained bank personnel, got 33 officers, about 300 other employees in the deal.

CIO raiding in the nonferrous metals industry has now run into 10 successive setbacks at the hands of leftist Mine, Mill & Smelter Workers (ex-CIO). In the latest foray, CIO's steelworkers—out with the auto workers to take over MM&SW contracts—lost 1,090 to 239 at Kennecott Copper's Magna (Utah) works.

American Enka, which had strike troubles with CIO last year, granted workers now under AFL contract at Asheville, N. C., an 8¢ raise last week. They get 3¢ immediately, 5¢ on approval by WSB.

Atomic plant workers at Oak Ridge, Tenn., last week voted 2-to-1 to retain CIO's Gas, Coke & Chemical Workers as bargaining agent, reject AFL's Atomic Trades & Labor Council. The CIO union has had a contract covering the atomic workers at Oak Ridge since 1946.

Copilots' pay on American Airlines will rise \$1,800 a year (from an average \$6,500) if AFL's Airline Pilots Assn. O.K.'s federal fact-finders' recommendations. Company accepted them. Union held back because the board, named in January to avert a strike, didn't cut the current 85-hr. monthly flying time.

Union mergers have brought together the United Leather Workers and the Meat Cutters & Butcher Workmen, both AFL, and the Handbag, Luggage, Belt & Novelty Workers (AFL) and a 12-year rival, the independent Pocket-book Workers Union of New York. In both cases, small unions were finding the going too hard and costly.



# "Our Fruehaufs save us 2 days

ON DELIVERIES TO THE WEST COAST" — Dugdale Packing Co.



AL G. KERSNICK, Sales Mgr. and Fleet Supt., Dugdale Packing Co., St. Joseph, Mo.



**D**UGDALE shrinks distances in its delivery of choice and prime beef products to customers across U.S.A. . . . with fast, flexible Fruehauf Trailers.

"Not only have Trailers speeded up deliveries—*saving us 2 full days to the West Coast*—but their efficient temperature control has eliminated spoilage", reports A. G. Kersnick.

Like Dugdale, businesses of all kinds, in over 100 industries are finding in Fruehauf Trailers the way to faster, lower-cost distribution. For full facts

on the Trailer *built to your business* . . . write today for Fruehauf's free catalog of The World's Most Complete Line of Truck-Trailers. Fruehauf Trailer Co., 10941 Harper Ave., Detroit 32, Michigan.



REFRIGERATED FRUEHAUFS KEEP UP QUALITY CONTROL. Here, R. W. Dennett, Gen'l. Mgr., Dugdale, makes final inspection of loaded beef destined for the West Coast.



**FRUEHAUF GRAVITY-TANDEM SAVES TIRES.** "These tires have gone 110,000 miles and look as if they'll double that before retreading," reports Chief Mechanic Charles Hays.



**FRUEHAUFS SPEED LOADING.** Longitudinal hanging rails facilitate loading . . . prevent temperature drop in meat. Suspension of meat provides freer circulation for refrigeration system.



**FRUEHAUF STAINLESS STAYS CLEAN LONGER.** Road dust vanishes at touch of water spray. "It won't rust or corrode. Never needs painting," reports Dugdale Packing Co.

MEAT is just one of the vital necessities of daily living delivered to you all so fast by Motor Transport. As our No. 1 transport service, it provides a Fruehauf fact for every American people.

## FRUEHAUF Trailers

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Utilities that have purchased  
C-E Reheat Boilers  
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|                                   |   |
|-----------------------------------|---|
| Alabama Power Company             | 2 |
| Boston Edison Co.                 | 2 |
| Carolina Power & Light Co.        | 2 |
| Central Hudson Gas & Elec. Co.    | 1 |
| Central Illinois Public Serv. Co. | 2 |
| Cincinnati Gas & Electric Co.     | 2 |
| Cleveland Electric Illum. Co.     | 3 |
| Connecticut Light & Power Co.     | 1 |
| Dayton Power & Light Co.          | 4 |
| Delaware Power & Light Co.        | 1 |
| Duke Power Co.                    | 6 |
| Electric Energy Inc.              | 4 |
| Florida Power & Light Co.         | 2 |
| Illinois Power Co.                | 2 |
| Kansas City Power & Light Co.     | 1 |
| Long Island Lighting Co.          | 2 |
| Metropolitan Edison Co.           | 3 |
| N. Y. State Electric & Gas Co.    | 2 |
| Niagara Mohawk Power Corp.        | 5 |
| Pacific Gas & Electric Co.        | 2 |
| Philadelphia Electric Co.         | 1 |
| Public Service Elec. & Gas Co.    | 3 |
| Rochester Gas & Elec. Co.         | 2 |
| Rockland Light & Power Co.        | 1 |
| South Carolina Elec. & Gas Co.    | 2 |
| Southern California Edison Co.    | 2 |
| Tennessee Valley Authority        | 4 |
| Union Electric Co.                | 2 |
| Virginia Electric & Power Co.     | 2 |
| Wisconsin Electric Power Co.      | 5 |

Many steam-electric power stations going into service this year will use about *five per cent* less fuel to produce a kilowatt-hour of electricity than the *most modern station* built as recently as two years ago — a saving that, in a large station, may amount to several hundred thousand dollars annually.

This saving will help the utilities keep electricity America's "best buy." But just as important as the dollar savings, in the light of our present defense program, is the conserving of our fuel reserves and the lightening of the burden on our transportation facilities.

How are such fuel economies attainable? The answer is *reheat* — the modern application of an old principle. The efficiency with which steam does work depends primarily on its temperature — the higher the temperature the greater the available energy. In a reheat boiler, after the steam has passed part of the way through the turbine, with a resulting drop in temperature, it is returned to the boiler for reheating to its original temperature. It is then returned to the turbine where, by virtue of the restored heat, it does its work more efficiently.

Earlier reheat boilers were quite complicated and expensive, and most engineers did not consider that the fuel saving was sufficient to justify the higher first cost. In recent years two things have greatly altered this picture: 1. substantially increased fuel costs. 2. the development of simplified designs of reheat boilers.

Combustion Engineering-Superheater, Inc. has played a leading role in developing the modern reheat boiler, as evidenced by the fact that in the last 5 years *nearly 60%* of all reheat boilers purchased, were designed and built by Combustion.

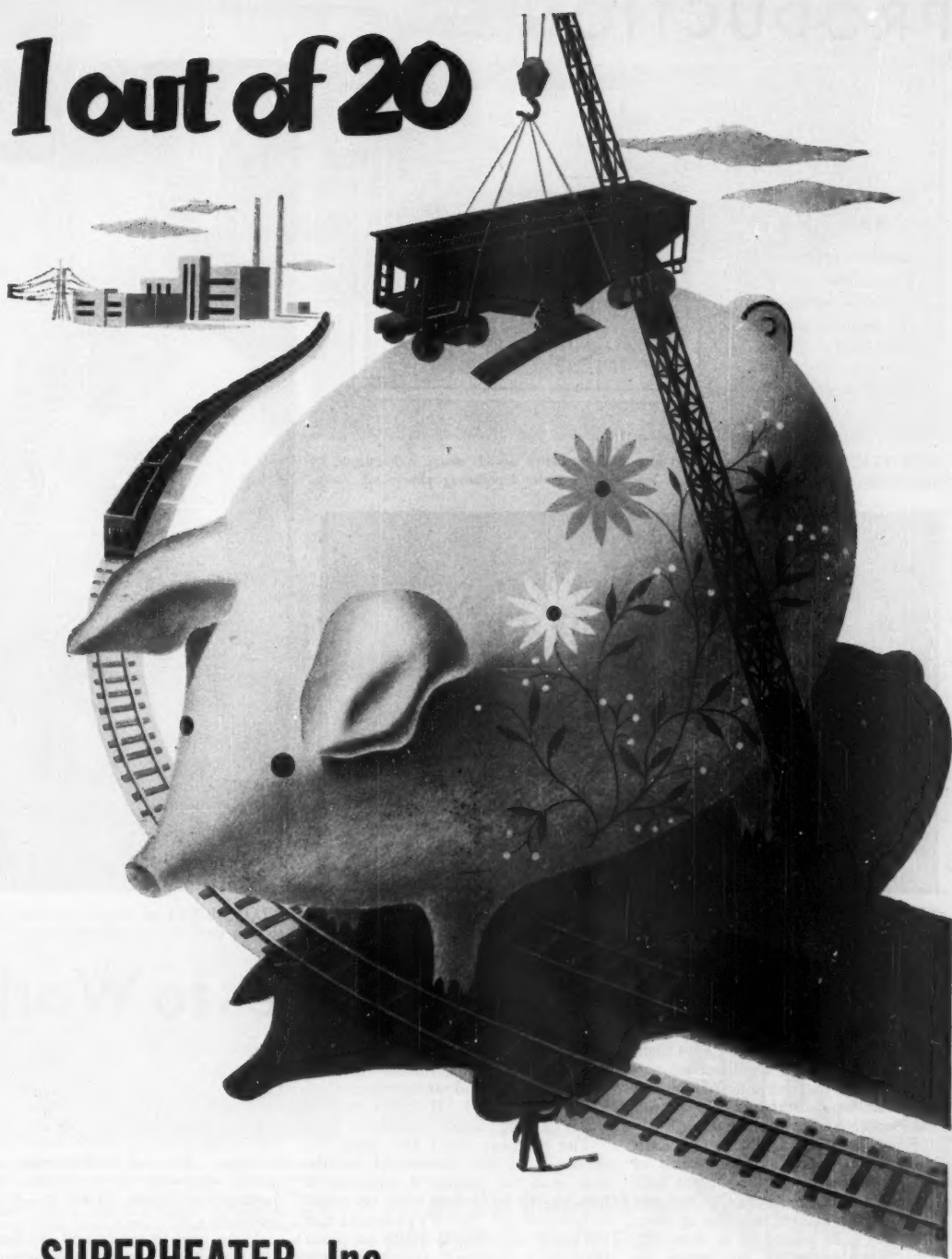
This is the kind of design leadership you can expect when you turn to Combustion for your steam requirements whether utility or industrial — whether power or process — whether large or small.

B-491



## COMBUSTION ENGINEERING

# 1 out of 20

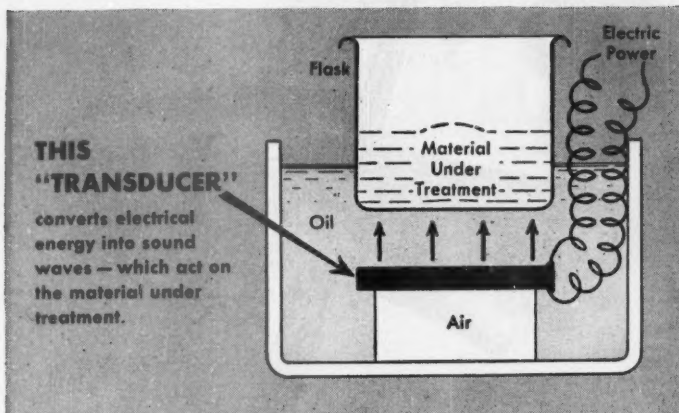


**—SUPERHEATER, Inc.**

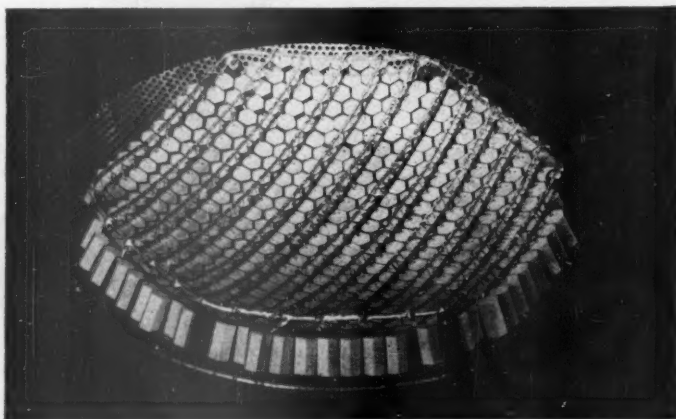
Combustion Engineering Building • 200 Madison Avenue, New York 16, N. Y.

ALL TYPES OF STEAM GENERATING, FUEL BURNING AND RELATED EQUIPMENT

# PRODUCTION



ELECTRICAL ENERGY, converted into high-frequency sound waves, is harnessed by this device. Brush Development Co. has adapted it to depolluting paper mill waste.



THE HEART of the new sound-making machine is this honeycombed ceramic element. It uses principle called piezoelectricity to turn electricity into sound.



PILOT MODEL of Brush's ultrasonic machine is used for experimental work.

## Putting Ultrasonic Waves to Work

Treating paper mill wastes with high-frequency sound to remove fiber particles will be the first industrial use of ultrasonic equipment made by Brush Development Co., Cleveland.

Right now Brush Hypersonic units are being installed as components of a water-treating plant for a paper mill. The ultrasonic mechanism is designed to help separate out tiny bits of fiber, too small to be picked up by screening. Fiber particles are a big reason for stream pollution complaints leveled against paper makers. They settle in the stream, emit gases that kill fish.

• **Trapped**—With ultrasonics you can trap these elusive particles. Shoot a

beam of these high-intensity sound waves at fiber-bearing waste water, and the fibers group and arrange themselves in soldierlike rows. It's then easy to comb out the aligned particles.

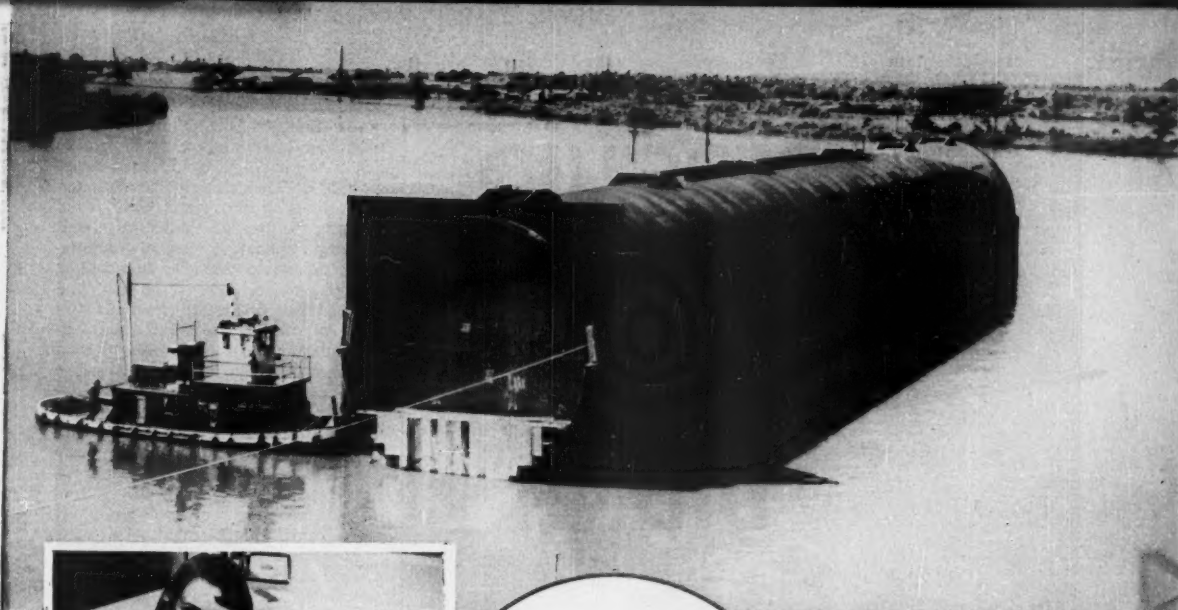
The company won't talk about the details of its first commercial installation or of the troubles it overcame in bringing the equipment from lab model to full-scale size. But it's presumed that the paper mill's liquid wastes are piped through a chamber, there irradiated with sound waves from Brush machines, then combed free of fibers downstream of the ultrasonic equipment.

• **Pilot Model**—Brush first went to work on ultrasonic industrial processing

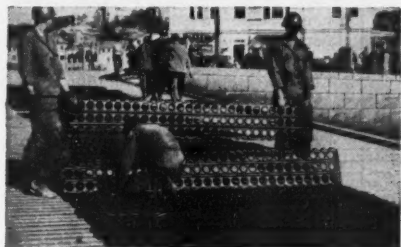
in October, 1949, when it opened its Hypersonic Division (BW—Nov. 19'49, p74). It's a tricky engineering job to come up with equipment for generating sound waves you can't hear. (The human ear picks up sound waves from between 5,000 and 18,000 cycles per second; ultrasonic devices produce frequencies well above 30,000 cycles per second.)

Along with its paper mill job Brush has perfected a bench-sized unit for laboratory or pilot operations (picture). This equipment has a 2,000-watt transducer (a part that converts electrical energy into sound energy). The sound waves are then transmitted through oil





**DISHWASHER RACKS** like this call on almost every one of the superior qualities of Stainless Steel. Great strength and light weight; freedom from distortion and sagging; resistance to corrosion, heat, cold, abrasion; permanent good looks; sanitation. U-S-S Stainless Steel is extremely important to America's mobilization.

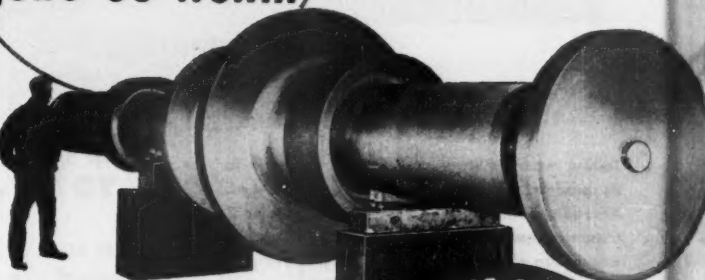


**STEEL LANDING MATS**, commonly used for "quickie" combat airfields, are here being placed on a wooden pier to speed up the landing of supplies. Although a great deal of steel is required to meet our mobilization needs, United States Steel is big enough, fortunately, to supply steel for that purpose and also for many essential everyday uses. And the steel-making capacity of U-S-Steel is expanding every year.

#### FACTS YOU SHOULD KNOW ABOUT STEEL

Steel furnaces in the United States produced an average of more than 8 million tons of steel every month in 1950. Every month, their output exceeded a full year's production in all but four foreign countries.

Only **STEEL**  
can do so many  
jobs so well...



**KNOW WHAT THIS IS?** . . . aside from being a whale of a mass of steel all in one piece? It's a heavy forging weighing 81,500 pounds, eventually destined to become a water wheel shaft for a hydro-electric generating station. To the making of these big fellows, U.S. Steel's Homestead District Works brings a combination of the finest steel, skilled craftsmen, and modern equipment.

**TUNNEL PUTS TO SEA!** This giant cylinder of steel will form part of the new, half-mile-long vehicular tunnel under the Houston Ship Canal between Baytown and La Porte, Texas. Nearly 35 feet in diameter, 300 feet long, and with both ends sealed to make it seaworthy, this tunnel section has just been "launched" from the U.S. Steel yards at Orange, Texas, where it was fabricated, and is beginning its 125-mile trip by water to its final destination. When completed, the undersea tunnel will carry 3009 feet of State Highway 146.

... and this trade-mark is  
your guide to quality steel

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UNITED STATES STEEL EXPORT COMPANY • UNITED STATES STEEL PRODUCTS COMPANY • UNITED STATES STEEL SUPPLY COMPANY • UNIVERSAL ATLAS CEMENT COMPANY • VIRGINIA BRIDGE COMPANY



**DIDN'T**



**WAIT!**



Today, when military and civilian demands for its products have doubled all previous records, Aeroquip announces the completion of a sizable expansion program. Two new structures and the acquisition of a new subsidiary have added more than 100,000 sq. ft. of highly productive space to Aeroquip's plant facilities.

It is not through mere chance that these important new additions are in operation today. More than a year ago the first warning signs that led to rearmament were recognized. Then, Aeroquip didn't wait for government prodding or financing, but with private capital and typical American initiative began a project which assures greatly increased production of vital Aeroquip products TODAY . . . when they are of utmost importance.

*\*In Jackson, Michigan, there is a new 65,000 sq. ft. addition to the Aeroquip main plant.*

*\*\*In Burbank, California, this modern 30,000 sq. ft. plant has just been completed.*

*\*\*\*Metalco, Inc., a new Aeroquip subsidiary, operates this plant in Cheboygan, Michigan.*

## **AEROQUIP CORPORATION**

**JACKSON, MICHIGAN**

**FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE**

to the test tube or flask containing the liquid to be treated.

• **Air Bubbles**—One knotty problem with transducer oil that Brush had to lick was cavitation, the formation of air bubbles. Cavitation acts as a muffler, keeps most of the sound waves from reaching the material under treatment. You can't tolerate cavitation for ultrasonic operations such as accelerating bacteria growth, internal heating, and coagulation. But some reactions you can't get without cavitation; emulsification, ultrasonic cleaning, disruption of pathogenic bacteria, and sterilization are a few.

For the operations where it is unwanted, Brush got around cavitation in two ways: (1) developing its own piezoelectric element—the device that turns electricity into sound—and (2) getting a good coupling between transducer and material being treated.

• **Focusing Sound**—With its new piezoelectric ceramic, barium titanate, Brush gets frequencies up to 4-million cycles per second. Most of the company's transducers use a concave mosaic-shaped ceramic element (picture, page 44).

That's to focus the sound energy generated. This focal region is positioned in the pilot machine's radiation chamber. De-gassed oil, under pressure, couples the energy between the ceramic element and the transducer's radiation chamber. Precautions are taken to guard against entrapped air within the housing. A pump inside the transducer housing circulates the oil, further safeguards against cavitation. Brush has priced its ultrasonic transducer and generator package at less than \$10,000.

To develop the market for ultrasonic equipment, Brush is researching applications in particular fields and trying to persuade companies in other areas to explore the possibilities themselves. Brush engineers are close-lipped on ultrasonic programs undertaken for selected clients. They're just as reticent in identifying their clients. But some of the work that Brush and other companies are doing with ultrasonics is known.

• **Acid Recovery**—Several economical ultrasonic uses in the petroleum industry look good. The sound-wave technique could help recover acid used in making high-octane gasoline. It also should prolong the life of rare and costly catalysts.

Speedier laundering, too, is in the offing with ultrasonics, no matter what kind of detergent or water, soft or hard, is used. Ultrasonic removal of the dirt permits the water to be used over and over again. In dry cleaning sound waves have been shown to remove spots. Metals also have been cleaned and degreased by sound waves (BW—Sep. 24'49, p64).



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America remembers . . . and in the months ahead will look for products that are built to last. Realizing this, Emerson-Electric continues its 61-year policy of exhaustive research, scientific design and precision pro-

duction to build motors that *last*. In this way Emerson-Electric and its customers will continue to meet the demand for quality merchandise.

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Appliance and equipment manufacturers, with applications for motors of 1/20 to 5 h.p., can profitably use these reference guides. Specifications, construction and performance data are included for these motors:

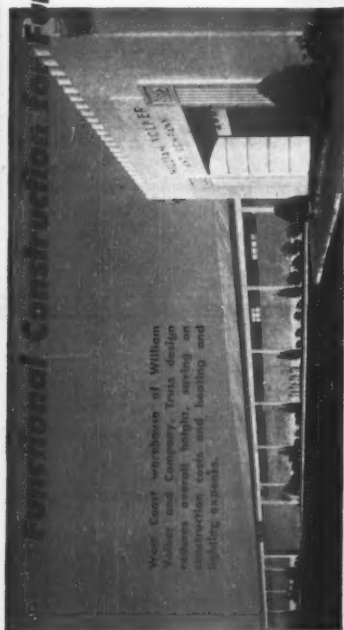
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| <input type="checkbox"/> 164-A Capacitor-Start | <input type="checkbox"/> 164-E Oil-Burner |
| <input type="checkbox"/> 164-B Split-Phase     | <input type="checkbox"/> 164-F Jet Pump   |
| <input type="checkbox"/> 164-C Integral        | <input type="checkbox"/> 164-G Blower     |
| <input type="checkbox"/> 164-D Fan-Duty        |   |

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## Functional Use...



48

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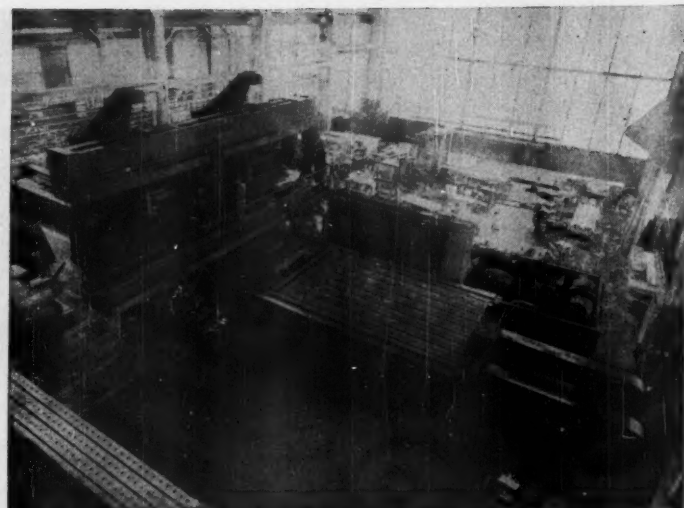
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THIS GIANT skin mill will make one-piece wing sections for Lockheed's F-94 jet fighter. The long flat bed that holds the work moves back and forth beneath the cutting equipment.

## Making Plane Sections in One Piece

Lockheed will soon get a new giant skin mill to make one-piece parts for wings and fuselages. Result: cheaper, faster output.

Last week the one-piece section for airplane wings and fuselages came another step closer to mass production.

Giddings & Lewis Machine Tool Co., Fond Du Lac, Wis., announced that it is finishing construction of a giant skin mill that cuts whole self-reinforced sections for wings and fuselages from sheets of solid or rough-forged aluminum alloy. When it's completed the mill will go into Lockheed Aircraft Corp.'s Burbank (Calif.) plant for making F-94 jet fighters.

• **A Pet Project**—The idea of one-piece airplane sections has been one of the pet projects of aircraft designers for several years now. Since the last war, Lockheed (BW-Apr.28'51,p43) has turned out lots of one-piece wing sections that are forged in huge presses—an idea originally developed by the Germans.

Like the forging press, the skin mill will mean cheaper and faster production of self-contained sections that are now complex assemblies of a few hundred parts. But it's still too early in the game to tell whether the mill will replace the press, or vice versa.

• **How It Works**—In operation the mill automatically cuts and shapes a predetermined pattern of three dimensions from one surface of sheet metal. A two-dimensional electronic tracer control, engineered by General Electric, takes orders from a master pattern, then guides the machining equipment to cut

the pattern laterally and longitudinally. At the same time another cutting device cuts the surface of the sheet to varying thicknesses.


Neither Lockheed nor Giddings & Lewis indicated the exact sizes or shapes of the sections that will be turned out on the mill. But with work loads that weigh up to 150 tons the cutting equipment can work in an area that measures 10 ft. wide by 34 ft. long.

• **Differences**—The machining technique of the skin mill will show up a few differences from the press forging method. To begin with, it is a more flexible tool than a forging press. It needs only adjustment of its electronic controls to change to a section of different design. A press, on the other hand, needs a new set of expensive dies to change from one section design to another.

But the skin mill has a lower rate of productivity than a forging press. While the mill must cut the section into shape, a press can do the job in a single stamping operation, although the size of its work piece is limited.

• **Pro and Con**—Mention the qualities of forged and machined pieces to most metallurgists, and they'll give you an argument, pro and con. Some say that forging gives strength to a part that machining can't touch. But if so, the inherent strength of the alloyed aluminum will make up for the lack of strength in machining.





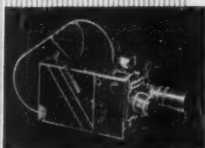
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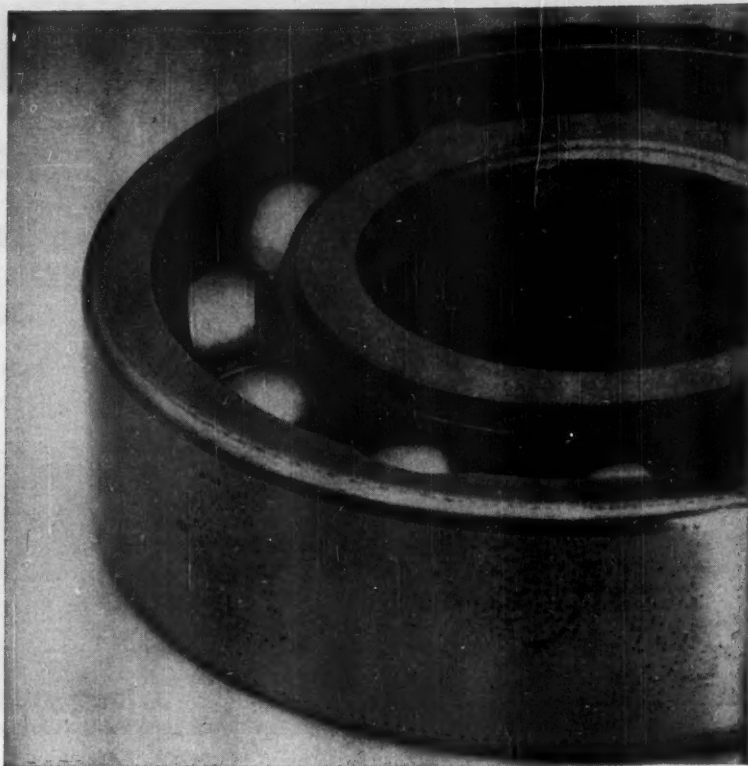
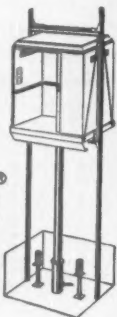
Several advantages are gained in using Oilraulic Passenger Elevators: (1) You do away with the costly, unsightly penthouse that interferes with building design. (2) The lighter shaftway structure used with the elevator "that's pushed up" means a substantial saving in construction costs. The powerful hydraulic jack supports the elevator and its load. (3) The compact electric power unit usually requires no special machine room.

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**SWEATY FINGERPRINTS** ruined this ball bearing. The sweat corroded the housing in

## Ersatz Sweat Fights Metal



**SYNTHETIC SWEAT** at Socony-Vacuum's laboratory helps to standardize corrosion experiments.



**SLUSHING OILS** of all types help to protect precision-machined parts from effects produced by sweat.



approximately 24 hours, turned it into a reject.

## Corrosion

If too many of your machined metal parts are ruined by corrosion from sweaty fingerprints, there's a good chance the offender is a curly-haired redhead—someone who either makes the part or handles it soon after it has been made.

Researchers in metal corrosion at Socony-Vacuum Oil Co.'s Brooklyn (N. Y.) laboratory will tell you that it's the sweat, and not the fingerprint, that identifies the offender. S-V's specialists say that curly redheads sweat more than blonds or brunets.

• **Lab Steps In**—By studying the peculiarities of human perspiration, Socony-Vacuum researchers have been able to develop and improve slushing oils that neutralize or remove the fingerprints before they cause damage to metal parts. In 24 hours the corrosion from a print can ruin finely made bearings, gears, or piston rings.

The trouble with human perspiration is that it varies too much among individuals to suit S-V's technicians. Corrosion experiments aren't accurate

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**Armor plate of any thickness**



AND THAT'S JUST ONE of the many amazing facts about the Acetogen Process—the only really new flame-cutting development in years!

The Acetogen Process now makes *complete* plate-edge preparation possible *with a flame!* It saves vital man-hours by eliminating most of the grinding, finishing, beading, and bridging formerly necessary. It makes *precision* flame-cutting a reality!

Acetogen Fabricators are proving these statements *today* in the Philadelphia plant of Henry Disston & Sons, Inc.—doing a job that industry thought couldn't be done. They are turning out thousands of armor plates—each one precisely cut, each one duplicating its pattern to within  $\frac{1}{16}$ th of an inch! This work is a source of continual satisfaction at Disston, and Baldwin-Lima-Hamilton, where the plates are assembled.

We can produce results just as eye-opening in *your* plant. We have the gas and nozzles, and the personnel with the "know-how";

we will act either as consultants, or as sub-contractors doing the job in your plant. We invite your inquiry. Acetogen Fabricators, Inc., 822 Commercial Trust Bldg., Philadelphia 2, Pa.

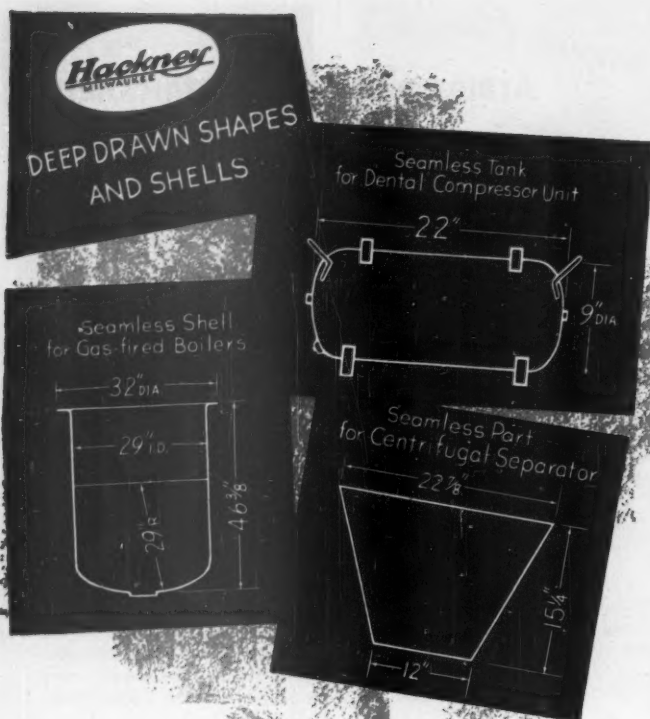
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unless they're tried with a standardized kind of sweat.

To get a standard product, the lab men make a synthetic sweat from a compound of lactic acid, urea, salt, and water. This ersatz perspiration stays the same, chemically, while that of a human changes from day to day—depending upon body temperature, physical activity, and metabolism.

The synthetic is applied to different kinds of metal plates to get an over-all check on corrosion rates. Then the plates are given a filming treatment with standard and new slushing oils.

• **Seasonal Factor**—Experiments show that dangers of damage from fingerprint corrosion are greatest during the spring and fall. In these seasons sudden changes in temperature in a machine shop indirectly do damage overnight. Moisture formed by temperature changes activates the crystals of drying fingerprints, which attack the metal.

Much of the tiny crystal fingerprint deposit is made up of salt that attracts still more moisture from the air. The salt speeds up the rate of corrosion because it makes water a conductor of electricity. And nearly all metal corrosion is an electrolytic process.

• **S-V's Goal**—Big aim of S-V's current research is to broaden the usefulness of its slushing oils. And the ultimate goal is an oil formula that will not only clean away sweat deposits, but will give metals lasting protection against subsequent handling.

### PRODUCTION BRIEFS

A catalytic reforming process of Chemical Construction Corp., New York City, makes ammonia from natural gas at less cost than the conventional gasification of coal. Natural gas is reformed with steam to produce hydrogen, the raw material for ammonia.

Controlling blimps in flight is made easier with a transmission-propeller combination, worked out by Curtiss-Wright Corp. for the Navy. Zep-prop has a variable propeller pitch that lets the blimp slow down, hover, stop, or back up in the air.

To triple its phenol output, Allied Chemical & Dye Corp.'s Barrett Division plans an \$8-million plant at Philadelphia. The chemical will be synthesized there without scarce materials such as sulfuric acid or chlorine.

More guided missiles: The Navy is shaping up \$64.2-million worth of contracts for its "two highest priority air defense missiles." To produce the missiles the Navy also plans to invest \$70.7-million in plant facilities.



 *Naugatuck*  
ROYAL FAMILY OF PLASTICS



## Naugatuck Marvinol lifts the lid on your plastic future

There is a good deal more than ice cubes in this unusual bucket made of Marvinol vinyl resin.

If you look into it, chances are you'll find a whole "bucketful" of promising ideas for your product future.

Look what Marvinol did for this product! In the new cellular form, this "n'Icer"\* Bucket is "finger-lift" light... so flexible it can squeeze apart clustered ice cubes... so insulating that the ice cubes are 90% themselves after four hours! It won't tarnish—is unbreakable, is lovely to look at and can be made in all colors—a perfect compli-

ment to any table. It imparts no odor or taste.

As you read about Marvinol-made ice buckets, perhaps you can visualize what Marvinol may do to improve your products. Marvinol can create hundreds of things—film, sheeting, sponging, or rigid—better and more economically.

And in Naugatuck Chemical, you have a reliable, basic source of raw materials that's in business to stay. Write us on your company letterhead today.

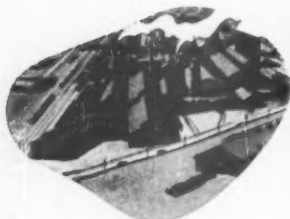
\*Made by The Sponge Rubber Products Company, Shelton, Connecticut.

 *Naugatuck Chemical*

Division of UNITED STATES RUBBER COMPANY  
45 ELM ST., NAUGATUCK, CONNECTICUT

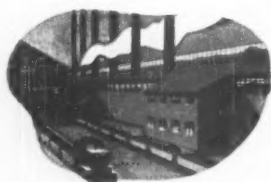
BRANCHES: Akron • Boston • Charlotte • Chicago • Los Angeles • New York • Philadelphia • In Canada: Naugatuck Chemicals, Elmira, Ontario  
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# *This is National Steel*



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Mills at Weirton, West Virginia, and Steubenville, Ohio. World's largest independent manufacturer of tin plate. Producer of a wide range of other important steel products.



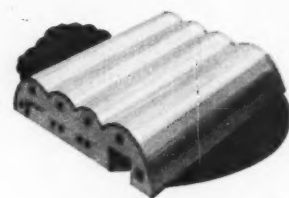
## **GREAT LAKES STEEL CORP.**

Detroit, Michigan. The only integrated steel mill in the Detroit area. Produces a wide range of carbon steel products... is a major supplier of all types of steel for the automotive industry.



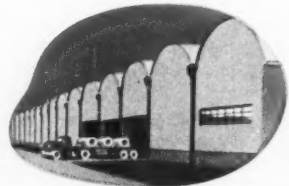
## **THE HANNA FURNACE CORP.**

Blast furnace division located in Buffalo, New York.



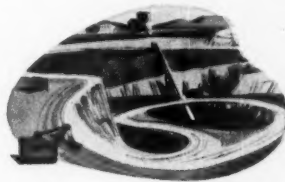
## **STRAN-STEEL DIVISION**

Unit of Great Lakes Steel Corporation. Plants at Ecorse, Michigan, and Terre Haute, Indiana. Exclusive manufacturer of world-famed Quonset buildings and Stran-Steel nailable framing.



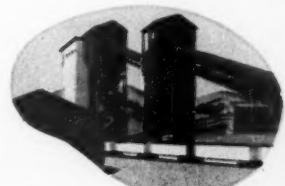
## **NATIONAL STEEL PRODUCTS CO.**

Located in Houston, Texas. Recently erected warehouse, built by the Stran-Steel Division, covers 208,425 square feet. Provides facilities for distribution of steel products throughout Southwest.



## **HANNA IRON ORE COMPANY**

Cleveland, Ohio. Produces ore from extensive holdings in Great Lakes region. National Steel is also participating in the development of new Labrador-Quebec iron ore fields.



## **NATIONAL MINES CORP.**

Coal mines and properties in Kentucky, West Virginia and Pennsylvania. Supplies high grade metallurgical coal for the tremendous needs of National Steel.

In an industry whose very essence is bigness, National Steel is big.

It is big geographically. National Steel properties are located in twelve states. Its sales and distributing organization extends from coast to coast and across the seven seas.

It is big physically. National Steel owns huge mills and mines... a complete fleet of lake ore boats. It operates the world's largest open hearth furnaces... the world's largest and fastest electrolytic lines... one of the world's largest continuous rolling mills.

Most important, National Steel is big in ideas, big in vision. Its advances in steel-making methods and processes have helped revolutionize the modern steel industry. Its present expansion program is now increasing National Steel's annual capacity from 4,750,000 ingot tons to 6,000,000 ingot tons, carrying on a record of continuous growth.

This is National Steel... big today, bigger tomorrow... one of America's foremost producers of steel.

**NATIONAL STEEL**  
GRANT BUILDING



**CORPORATION**  
PITTSBURGH, PA.

**SERVING AMERICA BY SERVING AMERICAN INDUSTRY**



**NATIONAL  
STEEL**

**DEVILBISS**



### Source of product improvement

Many industries depend on DeVilbiss for product improvement through better finishes. They find in DeVilbiss products—Spray Equipment, Exhaust Systems, Air Compressors and Hose—the tools to effect savings in finishing, in furnishing compressed air, and in many other applications.



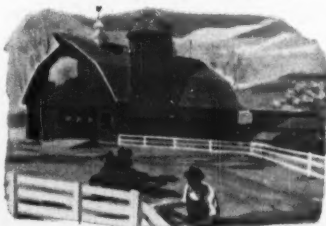
### Product improvement through DEVILBISS services

**Wedding Gifts** are more dazzling and durable—thanks to DeVilbiss spray finishing equipment. The plastic bride and groom miniature, which decorates the wedding cake; lovely china place settings; new luggage; fine furniture—literally hundreds of treasured things—are spray finished with DeVilbiss equipment. Quality is improved, costs are cut.



**Neat Fleet**—If you use commercial vehicles, a complete DeVilbiss Paint Shop for periodic refinishing of your

vehicles will protect your investment. It's good advertising, too. Neat, freshly painted vehicles, bearing your name, tell people you're a good company to do business with. DeVilbiss standard refinishing equipment will handle your jobs.



**Farm Buildings**, barns and fences are easy to spray with DeVilbiss Portable Equipment. Paint 3 to 4 times faster and effect big savings in time. Do many other jobs, too—spray disinfectants; inflate tires; paint furniture and machinery. Use DeVilbiss equipment for farms, homes, industry.



**Porcelain Enamel** makes kitchen appliances gleam. DeVilbiss developed a new method of low pressure spraying that conserves material and cuts costs. DeVilbiss Low Pressure Ceramic Spray Guns operate at pressures as low as 40 lbs., save as much as 35% in material, improve quality, lessen rejects, and lower unit costs. Material savings alone will more than pay for new DeVilbiss guns.



**Tanks or Propellers**, landing craft or shells—DeVilbiss engineers have had broad experience with the special techniques and equipment used in the finishing of war materiel.

**Whatever Your Needs**, civilian or military, DeVilbiss professional spray finishing equipment will help you save time, money and improve product quality. For data, phone the nearest DeVilbiss Branch Office or write direct to the factory.

**THE DEVILBISS COMPANY, Toledo, Ohio**  
Windsor, Ontario • London, England • Santa Clara, Calif.  
Branch Offices in Principal Cities

FOR BETTER SERVICE, BUY

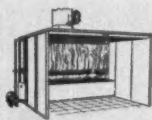
**DEVILBISS**



Spray Guns



Air Compressors



Spray Booths



Hose and Connections



Portable Spray Outfits



## NEW PRODUCTS



### How to Test Rails

You can't tell a weak rail from a sound one just by looking. The way to check, Branson Instruments says, is to test the rail's ultrasonic resonance. The company makes a portable ultrasonic detector that spots flaws in rails in such critical places as switches, tunnels, and grade crossings.

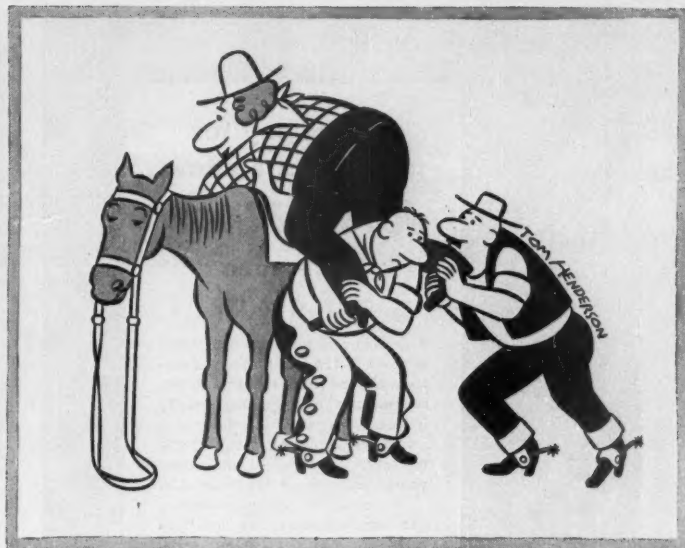
The 12-lb. unit consists of a canvas carrying case with a rod and cable arrangement and earphones attached. A quartz-crystal transducer in the rod head changes electrical signals into sound waves and does the testing. You first set the unit for volume and tone. Then flip a switch in the rod handle to turn it on. The ultrasonic resonance generates a tone in the earphones. If the rail is perfect, the resonance is at a frequency of 1,000 cps.; if there's a crack or flaw, you get a distinct change in the pitch of the signal.

You can check continuous sections of rail by sliding the rod head along the top of the rail, since a wear plate protects the transducer. Branson claims the unit tests 800 to 1,000 locations in a day. It is powered by batteries in the instrument case. The company also recommends the detector for use in testing steel and aluminum shafts and plates.

- Source: Branson Instruments, Inc., 430 Fairfield Ave., Stamford, Conn.
- Price: \$490.

### Easier Metal Cleaning

Industrial compounds used for jobs such as buffing are particularly difficult to remove from the finished piece. Usually, you have to use both an emulsion and an organic solvent. Pennsylvania Salt Mfg. Co. says its cleaning compositions—Solubilizing Cleaners



## There's a **YALE** hoist for *every* lifting job!



- Let YALE give you a "leg up" when there's lifting to be done. It's good business...helps you get the job done faster...more safely...at less cost.

That's because YALE makes all kinds of hoists...electric hoists, hand hoists, wire rope and chain hoists, trolley and hook suspension hoists, hoists with capacities from 500 pounds to 40 tons...each one *exactly* suited to a specific job!

This aluminum YALE Load King with synchromatic load brake, for example, is ideal where portability and fast, easy, hand lifting are desired.

Your YALE distributor can help you select the hoist that will wear longer, work harder and save more money on the particular kind of lifting done in your plant. Call on him soon.

Or, for FREE detailed information, write Dept. 146, The Yale & Towne Manufacturing Co., Phila. 15, Pa.

## YALE & TOWNE

YALE is the registered trademark of The Yale & Towne Manufacturing Co.

**If you pay for  
protection against  
*Rot and Termites*  
—be sure  
you get it!**

• Adding protection against rot and termites to the many other advantages of wood (resistance to rust, corrosion, crumbling, spalling) greatly influences its practical and economical use. But, to get full rot and termite protection, be sure that the lumber you specify or use is *pressure-treated*.

Wolmanized® pressure-treated Lumber gives lasting protection. High pressure (150 p.s.i.) drives the preservative deeply into the fibres of the lumber. Deep penetration is necessary in making lumber truly resistant to rot and termites. In pressure treatment the volumetric absorption of the preservative solution is measured in gallons per cubic foot—not in feet of coated surface.

Wolmanized Lumber is clean, odorless, paintable, non-leaching. Millions of feet of it have been used, for years and years, under the severest conditions.

Our engineers will be glad to discuss specific applications. Or, for further information, write for the booklet "Service Records for Wolmanized pressure-treated Lumber."

**American Lumber  
& Treating Co.**

General Offices:

1601 McCormick Bldg., Chicago 4, Ill.

Branch Offices in Baltimore, Boston, Jacksonville, Fla., Little Rock, Ark., Los Angeles, New York, Portland, Ore., San Francisco.



Look for this trademark; it identifies genuine Wolmanized pressure-treated Lumber.

®Wolmanized is a registered trademark of American Lumber & Treating Co.

**Wolmanized**  
PRESSURE-TREATED  
**Lumber**

Stops Rot and Termites

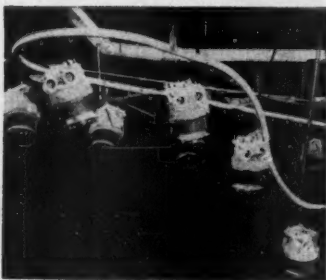
—do the cleaning job in one swoop—by a combined emulsion-detergent action.

Ingredients in the clear solutions form groups of oversized molecules. These molecules dissolve any compound left on the metal surface. The cleaners are neither acid nor alkali, are said to have good solubility and to disperse easily in water.

Pennsalt says the materials are specially formulated to reduce the chance of industrial dermatitis due to skin defatting. The vapor toxicity of the cleaners reportedly is no higher than that of an emulsion. The four compositions are designated SC-3, SC-21, SC-23, and SC-24.

• Source: Pennsylvania Salt Mfg. Co., 1,000 Widener Bldg., Philadelphia.

• Price: 95¢-\$1.45 a gal. in 55-gal. drums.



**Conveyor Sections to Fit**

Deep dips and hairpin curves aren't confined to roller coasters—you find them in overhead conveyors, too. For routes with intricate contours, Southern Engineering Co. builds a light-duty overhead conveyor that it calls Chain-Veyor.

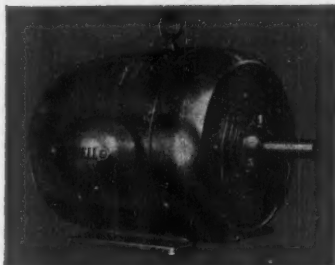
It consists of a power-driven chain enclosed in a tube. You get the tubing in standard sections, curved or straight, and combine the sections to get the conveying pattern you need. By joining horizontal, vertical top, and vertical bottom curves together, you get a variety of turns, with radii as short as 15 in. Chain-Veyor uses 45-deg., 90-deg., and 180-deg. curves.

Spaced at 6-in. intervals along the chain, pendants handle loads up to 30 lb. each; two pendants fitted with a cross-bar attachment at 12-in. intervals can carry a 60-lb load. With the variable-speed drive on all standard power units, you can adjust conveyor speeds from 3 ft. to 9 ft. per minute.

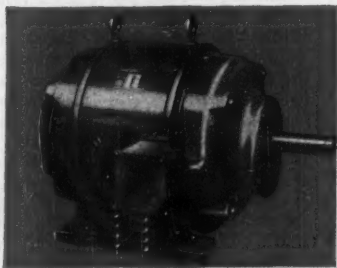
The tube covering the conveyor chain keeps dust out, lessens the chance of accidents. The company says it doesn't stretch when passing through heat-treating enclosures, as do cable conveyors. Its Oilite bearings require no lubrication. Southern Engineering ships



## How to give a cylinder block a clean start



Howell Type K Motor. Offers constant performance in the presence of dirt, dust, fumes and moisture. Sizes 3 to 150 H.P. at 1800 R.P.M. Either vertical or horizontal mounting.



Howell Type F Motor. A high-slip, high-torque motor designed for punching and shearing operations. Sizes  $\frac{1}{2}$  to 200 H.P. in open frames;  $\frac{1}{2}$  to 125 H.P. in enclosed frames.

This new Centri-Spray washer thoroughly cleans up to 400 cylinder blocks an hour. It often runs 3 shifts a day, six days a week. A tough job for the nine Howell Industrial Motors which power it!

Four 25-H.P. motors operate the unique Centri-Spray units which envelop the rotating blocks with a powerful high-volume spray of water. A high-head centrifugal pump, equipped with a 15-H.P. motor, flushes blocks internally. All foreign matter is *completely removed*, inside and out. Four motors, from  $\frac{1}{3}$  to 20 H.P., power the automatic sludge remover, the recirculating pump, the main conveyor and the high-pressure blowoff fan.

Howell engineers worked closely with this manufacturer to provide the *right* motor for each application. As a result, this Howell-powered washer easily takes the hardest operating schedule in stride.

Highest quality motors, designed for your specific jobs, are typical of the service you get from Howell. Let us handle your electric motor needs. You'll find precision-built Howell industrial type motors a profitable investment that pays off in extra years of dependable performance.

### HOWELL ELECTRIC MOTORS COMPANY

Howell, Michigan



HOWELL ELECTRIC MOTORS CO., HOWELL, MICH.

Precision-built industrial motors since 1915



Twin Disc Models  
MTU and MTS  
Machine Tool Clutches

## Step into any Factory



America's productive might is almost unbelievable . . . until you step into any factory and see what just one machine can do.

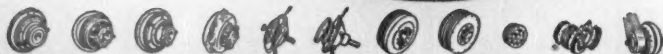
One reason for the tremendously fast, even split-second, work-cycles of thousands of machines is improved power transfer mechanisms—like Twin Disc Machine Tool Clutches.

For Twin Disc Machine Tool Clutches are pretty well standard in the machine tool industry—just as other types of Twin Disc Clutches are standard in other fields.

These units combine high clamping efficiency with comparatively low lever pressure, high torque capacity, single point adjustment—all in compact space. They're unaffected by centrifugal action, are precision-built, and rated for trouble-free performance. In other words, "they wear like a bearing and perform like the best friction clutch."

That's why they play so important a part in America's production capacity.

**P.S.** Remember, too, that Twin Disc, world's leading industrial clutch manufacturer, is a pioneer in industrial fluid drives such as Hydraulic Couplings, Hydraulic Torque Converters, HYDRO-SHEAVES and HYDRO-WYNDS.



TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Oakford, Illinois  
BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

the unit knocked-down. Once assembled, you can make changes or additions in a fraction of the time usually required.

• Source: Southern Engineering Co., Inc., 249 N. First St., Burbank, Calif.

## Vibrations—on Paper

It's hard to keep track of the fast-moving traces that register strain, vibrations, and the like on an oscilloscope (or cathode ray) screen. To do it, you generally have to photograph the screen repeatedly. But this sort of thing won't be necessary if you use a high-speed recording unit called Dynograph, according to manufacturer Offner Electronics, Inc.

Dynograph records the impulses as zig-zag lines on paper. It works at adjustable speeds up to 1/120 of a second and is said to be accurate to 1%. You can get a Dynograph with enough channels to handle seven separate traces at a time.

Offner says its unit is basically a laboratory or research tool. But it also has uses in the field.

• Source: Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago.

• Price: About \$3,800 for a six-channel unit.

## NEW PRODUCTS BRIEFS

A lightning arrester from JFD Mfg. Co., 6101 Sixteenth Ave., Brooklyn, N. Y., is designed to protect television antenna installations. It's easy to put up; eight teeth inside the arrester hold the antenna wires in place. Price: \$1.50.

A squatting ironing board adjusts to six height positions so women can iron comfortably while standing or sitting. The board has a mesh metal top that allows steam to escape, dries clothes faster. J. R. Clark Co., Spring Park, Minn., is the maker.

Addressing machine plates called Dash-plates are made from an alloy said to combine the strength of steel with the ductility of zinc. You can correct the plate up to 10 times in the same place, according to manufacturer Dashew Business Machines, Inc., Grand Rapids, Mich. Use of the plate reportedly saves 25%-40% in metal consumption.

An oscillating conveyor made by Link-Belt Co., 307 N. Michigan Ave., Chicago, handles a variety of loose bulk materials in its trough. You can add a metal cover with flexible connections at loading and discharge points to stop escaping dust or gases. The trough conveyor comes in lengths up to 100 ft.



"Congratulations...  
something really new!"

"Wish I'd thought of it!"

"You've scooped the field!"

"...revolutionized our concept of  
dictation service."

"You can use us as a reference."

"We're Televoice salesmen, too!"

"...extending it to all branches."

"We've standardized on it."

"...savings greater  
than you figured."

"Years ahead!"

# INSTANT SUCCESS

**Thomas A Edison**  
INCORPORATED

American business is greeting EDISON TELEVOICE with a thundering outburst of approval—and orders! Our industry has never seen anything like it. And that's because there's never been anything like TELEVOICE to meet your dictation needs. Easy to use as the telephone—complete remote control by push-buttons—"delivers" dictation right to secretary's desk—cuts cost of instrument dictation as much as 66%!! AND REMEMBER: It's covered by Edison patents. Edison proved it for six years. Edison's the only one who has it. See it!

## Edison TeleVoicewriter

*The Televoice System*



One to twenty



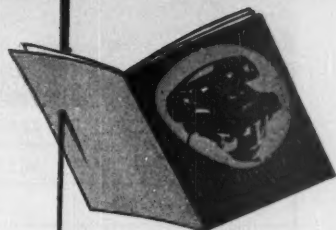
Televoice  
Stations



connect to  
the Edison  
Tele Voicewriter



We're currently hard-pressed to keep up with demands of business, government and the armed forces for the Disc Edison Voicewriter, the world's finest individual dictation instrument. Today, no one can match Edison's complete line: TELEVOICE Stations for average dictation, the Disc Edison Voicewriter where a single instrument is required. You'll gain by investigating now!



### ● SUCCESS STORY

Get the whole remarkable story! Send for this 12-page book which pictures and describes this amazing new facility—what it is, and what it does to speed your flow of business and cut costs. Use the coupon now—or phone your local Ediphone office!

EDISON, 72 Lakeside Avenue, West Orange, N. J.  
Okay—send me A LINE ON TELEVOICE.

NAME \_\_\_\_\_  
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ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

# REGIONAL REPORT



## Income Rise Resumes—but Slower

Income has started up again—but it's still moving only about half as fast as it did last fall and during the early winter months. There are two principal reasons:

- The first big surge of new business after Korea went largely to existing plants and was piled on top of civilian output. The economy felt the effect immediately. But the orders that came along later mostly replaced civilian business. Their net effect isn't so bullish. And new defense plants are still largely in the construction or tooling-up stages, so their output and em-

ployment won't begin to boom income until later this year.

- Civilian-industry layoffs, because of materials shortages, are mounting. The automobile industry is the most obvious, with GM, Hudson, Studebaker, and others all being forced to close down for varying periods. But the problem has been getting more troublesome in other industries, too. Some of the smaller companies are being forced to close down entirely.

- Off the Pace—One result has been that the income rise in the country's major industrial regions has been less

than that for the country as a whole. From January to April, the composite income index increased by 1.5%. The rise in the Cleveland region was 1.1%; in the Chicago region 1%; in the San Francisco region only 0.5%.

Another region that has done poorly this year is Kansas City. Up through January, it combined excellent farm income with substantial industrial gains to register major income increases. But from January to April the rise was only 0.5%. Principal reason was bad farming weather.

At the end of April, the prediction

# Now-Automatic Lubrication System

## SPEEDS...SIMPLIFIES...CUTS COST OF MACHINERY LUBRICATION!

# ALEMITE

REG. U.S. PAT. OFF.

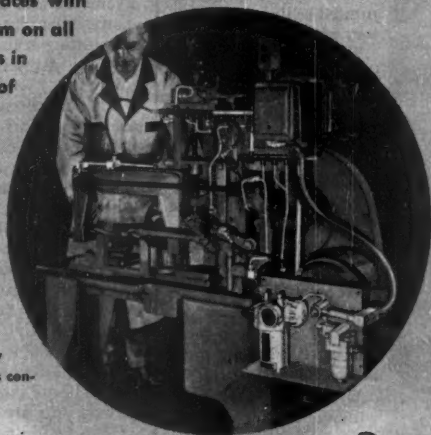
# OIL-MIST

## AUTOMATIC LUBRICATION SYSTEM

Unbelievably simple system atomizes oil into mist, distributes it through tubing to bearings. Bathes all bearing surfaces with fresh, clean, cool oil film. Uniformly maintains oil film on all sliding, rubbing, rolling parts regardless of variations in load, temperature or speed. No "peaks and valleys" of lubrication.

Fully automatic—eliminates waste and the uncertainties of the "human element." Extends bearing life as much as 17½ times. Seals bearings against dirt and abrasives. Cuts oil consumption as much as 90%. Greatly reduces the number of oils needed.

Eleven points on this automatic electric saw are served by Oil-Mist. Flexible lines carry lubricant to reciprocating and oscillating parts... condensing fittings apply liquid oil to a cam and roller... a spray fitting sprays oil on a drive chain, gear and sprocket. The lubricator is controlled automatically by the machine switch.



In Ball Bearing



In Plain Bearing



In Roller Bearing



• You'll marvel that a system so simple—without any moving parts—can bring such a revolutionary change in the lubrication of machinery. Requires only two simple settings—to control the amount of air pressure and to regulate the density of the Oil-Mist. Once set, they need no further attention. Proved by plant installations on a wide variety of machines in many industries including steel, coal, food processing, chemicals, metalworking, textiles and woodworking. Get the proof yourself, with the Desk-Top Demonstration in your office, without obligation.

**Alemite OIL-MIST Lubrication**

← OIL MIST

### DESK-TOP DEMONSTRATION

No obligation—Mail this coupon now

A trained Alemite Lubrication Engineer will give you the Desk-Top Demonstration at your office without obligation.



Alemite, Division of Stewart-Warner, Dept. B-61  
1850 Diversey Parkway, Chicago 14, Illinois

- ☐ Please have your Alemite Lubrication Representative arrange a desk-top demonstration of Oil-Mist. This entails no cost or obligation on my part.
- ☐ Please send me information about Oil-Mist by mail.

My name \_\_\_\_\_

Position \_\_\_\_\_

Company (leave blank if letterhead attached) \_\_\_\_\_



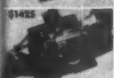
## Here is an interesting and Informative Business Book

"The Story of a Father and Son, or, Unscrewing the Inscrutable"

Elliott address cards file like index cards



A few other Elliott models



Printing Selling said of this book: "It is our candidate for the advertising Hall of Fame and it may well turn out to be the most famous piece of printed selling in the history of selling."

The following comments are selected from the thousands that have come from the officials of America's largest corporations:

"Will Rogers would have loved you for it."

"It held us spellbound from cover to cover."

"It was both fascinating and inspiring."

"It belongs in every collection of Americana."

"It is an example of what private industry accomplishes."

"I have been flooded with requests for additional copies."

"It was much enjoyed by everyone in our office."

"The finest mechanical explanations I have ever seen."

"There is something inspiring about your story."

"Its sixty-four pages are wholly delicious."

"An outstanding contribution to contemporary advertising literature."

"It was so amazing I could not lay it down until finished."

Write today on your business letterhead.

**Elliott ADDRESSING MACHINE CO.**

151-F Albany Street, Cambridge 39, Mass.

was for one of the poorest crop years here in a long time. But since then the usual has happened: Conditions have improved, and the early forecasts appear far too pessimistic.



**E**MPLOYMENT throughout the region is edging steadily upward. But there are still no signs of a general labor shortage. In fact, in some areas—Evansville and the rest of southern Indiana, Memphis, and parts of Arkansas—recruiting teams from companies outside the district are hiring substantial numbers of workers.

• **Paducah Booms**—St. Louis is one of the boom spots of the region—employment for the city and suburbs is at a record high. But the boomingest spot the region has seen in years is Paducah. The big project here is the Atomic Energy Commission plant, 16 mi. northwest of the city. About 1,000 construction workers a month are being added to the payroll; employment will reach 12,000 this fall. And the AEC plant is only part of it—Pittsburgh Metallurgical is expanding its Paducah plant; Air Reduction Co. is building a new \$10-million plant; two big steam powerplants are going up.

The Paducah boom has been a godsend for nearby Cairo, Ill., which had been in a bad slump. But other southern Illinois communities haven't been so fortunate. Crab Orchard, near Marion, is still listed by the Labor Dept. as a distress area; nearby Harrisburg is also badly off. The Mt. Vernon area had been weak, but its transportation equipment industry has been staging a comeback in recent months under the impetus of defense orders.

• **Touch and Go**—Evansville is a relatively weak spot, but things here are not so bad as the city had feared. Unemployment has increased since last July's low—but that's due to a rise in the labor force; employment is also slightly higher.

Memphis is another weak spot. The area has very few defense contracts, and the employment rise has steadily lagged behind the region as a whole. To make matters worse, the whole farming area

around the city has been hit hard by drought.

• **Fair Prospects**—Elsewhere in the district farm income prospects are just fair. Early-season frost and heavy rains critically delayed farm work, and the subsequent drought has been very bad, particularly south of St. Louis. Arkansas farmers planted about 300,000 acres less to grains than last year; they probably went into cotton. And the Arkansas drought is so bad that the cotton may not even germinate.

The early strawberry crop in eastern Kentucky was damaged up to 50% in some spots; the area around Bowling Green was hardest hit. And the peach crop of western Kentucky and southern Indiana and Illinois was almost a total loss.

Most favorable farm outlook in the region is for central and northern Missouri.

• **Construction**—Among the new plants or expansions in the region: Westinghouse is building a \$2-million, 500-man plant at Hot Springs, Ark., and a 700-man addition to its Little Rock plant. Also in Arkansas, GM is building a multimillion-dollar aluminum-fabricating plant at Jones Mill; Columbian Carbon will build a \$14-million carbon-black plant at El Dorado.

In Illinois, Dow is building a \$26-million continuous rolling mill for magnesium at Madison; Monsanto is spending \$14-million on expansion at Monsanto; Allen Industries is building a \$1.2-million plant at Herrin; and a \$4-million food-processing plant is going up near Jacksonville. The Army is spending \$15-million to renovate the arsenal at Charlestown, Ind., which employed 10,000 in World War II; Good-year will operate it.

In Kentucky, General Electric is building a huge new plant at Louisville. The first unit, to make jet engine parts, will cost \$14-million and employ 2,000; when the plant is complete, in five or six years, some 16,000 will be employed. Elsewhere in the state, Glenmore Distilleries will spend \$34-million on expansion at Owensboro; Corning Glass is building a \$2-million plant at Danville.

• **Other States**—In Mississippi, Rockwell Mfg. Co. will build a 300-man plant at Tupelo; Knickerbocker Mfg. Co. plans a 135-man expansion at West Point; and Samson Hosiery is building a 100-man addition to its plant at Corinth.

In Missouri, St. Joseph Lead is spending over \$10-million to expand its facilities around Herculaneum; Lilly-Tulip Cup plans a \$4-million plant at Springfield, and Nordberg Mfg. Co. is building a \$24-million diesel-engine factory in St. Louis.

And at Memphis, du Pont is building a big hydrogen peroxide plant next





## *special steels take special skills*

Look around your home, and you'll find dozens of household articles that require *special* alloy steels. The making of these, and a host of other steels, calls for Crucible's special skills. While many are produced in large quantities, the majority require such careful handling that mass production is out of the question.

Take your kitchen for instance—your meat grinder and can opener require a special alloy steel that will retain its sharpness under severe abuse. Stainless steel cabinets, dinnerware and utensils represent other uses for special steel. And when you consider how these uses are multiplied when projected into industry . . . you can understand why Crucible is known for its hundreds of special purpose steels.

Every day new industrial advances need new special steels. If you use special steels, feel free to draw on the wealth of experience that Crucible metallurgists have gained in more than fifty years of special steel leadership.

# CRUCIBLE

first name in special purpose steels

51 years of *Fine* steelmaking

CRUCIBLE STEEL COMPANY OF AMERICA, GENERAL SALES OFFICES, OLIVER BUILDING, PITTSBURGH, PA.

Spaulding Works, Harrison, N. J. • Midland Works, Midland, Pa. • Park Works, Pittsburgh, Pa. • Spring Works, Pittsburgh, Pa.  
National Drawn Works, East Liverpool, Ohio • Sanderson-Halcomb Works, Syracuse, N. Y. • Trent Tube Company, East Troy, Wisconsin

to the sodium cyanide plant it started last November; Kimberly-Clark is building a new \$2-million paper mill; and Delta Refining is building a \$14-million refinery.



**E**MPLOYMENT is at a high level in most parts of the district. Biggest exception is New York City. Because its heavy-goods industries are mostly small, the city's contribution to defense output must be mostly through subcontracts rather than primes. And the subcontracts haven't arrived in volume yet. As a result, there is unemployment in the city in occupations (engineers, for instance) that are high on the critical list elsewhere. Then, too, the apparel industry has dropped into its seasonal slump, more severe this year because of disappointing Easter retail sales. So employment in the city has been declining for the past three months; the dip from April to May was the sharpest in several years.

• **Sharp Contrast**—The neighboring northern New Jersey area presents a sharp contrast; employment there is up about 15% over last year. Biggest gainers, of course, are electrical, aviation, and other war-goods industries. Wright Aeronautical at Wood-Ridge, for instance, has 12,000 workers now compared with 6,800 a year ago. And it plans to add another 6,000 before the end of the year. Almost all north Jersey's consumer goods industries also show employment gains over last year.

The Buffalo area is another of the region's strongest spots. Although much of the defense production here is still in the construction and tooling-up stages, labor shortages, particularly in skilled lines, are already a major problem. Demand for men in the next two months is estimated at close to 10,000. Quite a few Buffalo-area employers have been advertising out of town for labor. To complicate the situation, this is the time of year for seasonal rises in employment in food and other nondurable industries.

• **Central Area**—Things are also booming at Rochester; increases in heavy-

goods employment have more than made up for declines in consumer goods. Result is a serious shortage of skilled workers, and overtime is common. Todd Co., for instance, is working two 60-hour shifts.

Syracuse, one of the strongest spots in the region in recent months, has leveled off since April. The sharp rise in employment has almost stopped. Chief reason seems to be the lag in defense orders. The labor supply is very tight.

Among the smaller communities, Geneva and Seneca Falls are among the strongest, due principally to work on the Sampson Air Base. Auburn—flat on its back recently because of the shut-down of its biggest industry, International Harvester—is on its feet again. A new General Electric plant is going up on the outskirts of town, and several manufacturers have taken over parts of the huge Harvester plant. Another area that has come up strongly is Utica-Rome.

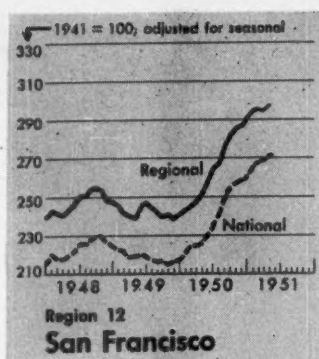
• **New Plants**—Biggest new-plant news in the region in the past few months comes from Westinghouse, which is building two new plants—one at Bath, to employ 2,000, the other at Horseheads, to employ 1,000. Precision Castings is spending \$4-million on expansion at Fayetteville; Alpha Portland is building a \$3-million cement plant at Jamesville; IBM is spending \$6-million on expansion at Poughkeepsie; Delco Appliance Division of General Motors will add a 500,000-sq.-ft. plant at Rochester to employ 3,000; GE is spending \$64-million to expand its generator plant at Schenectady.

In the New York City area, Lewyt plans a \$3.8-million plant at North Hempstead; Fairchild is building a \$2-million plant at Bay Shore; and Bulova will build a \$3-million watch-assembly plant in Jackson Heights.

In New Jersey, Monroe Calculating Machine plans a \$34-million plant at Morris Plains; Johns Manville is building a \$2-million building at Manville; Rheem is building a \$1.5-million factory at Linden.

At Stratford, Conn., the Air Force has taken over the Chance Vought plant that has been vacant since CV moved to Dallas two years ago. Avco will operate it, employ 5,000 eventually. Barden Corp. plans a \$2-million expansion of its bearings plant at Danbury.

• **Good Farming**—A good year is in prospect for the region's farmers. Dairying is the biggest income producer, and milk prices are considerably higher than they were a year ago. As for crops, the cool, wet weather of early spring delayed farm work only a little and helped to build up good subsurface moisture; the weather since has been practically ideal.



**U**NDoubtedly, there will be new records in employment this year; it is moving up steadily. Nevertheless, the rise is not nearly so rapid as it was last summer; in fact, in the past couple of months the climb has been due almost entirely to seasonal factors—agriculture, food processing, lumber, and construction.

Agriculture and food processing are just about at their early peak now; from the end of June until the fall harvest starts in August, some dropoff is to be expected. In the San Francisco Bay area, food processing employment is now about 13,000, compared with only 8,000 in March. Farm and food employment is also sharply higher in the Sacramento and Stockton areas.

• **Lumber**—Lumber employment in Washington, Oregon, and Idaho is up sharply, after a drop in March and April. But a trend to softer prices and fewer orders has the lumber trade uneasy. One reason for this is the shift in building from homes to heavy construction, which uses less wood. Chief result so far has been higher retail inventories.

So workers aren't buying so far ahead as they did earlier this year. If the trend continues, northwestern mills may be forced to "extend" the vacations just getting under way, as they did in 1949.

The Northwest's other basic industries are very strong. Boeing employment has passed 27,000 at Seattle and is still rising. Skilled machinists and engineers are critically short.

• **Plateau**—Business and employment in southern California seem to have reached a plateau. Continued increases in employment by shipyards, aircraft plants, and other defense establishments have been just about balanced in the past three months by declines in such consumer-goods fields as apparel, auto assembly, and television. But continued hiring for defense work should start the trend upward again soon.

Elsewhere in California, areas around major military establishments are boom-

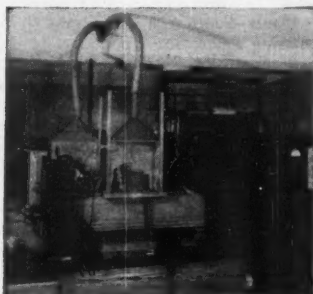
See how Frigidaire furnishes

## MAN-MADE CLIMATES FOR PRECISE PRODUCT TESTING!

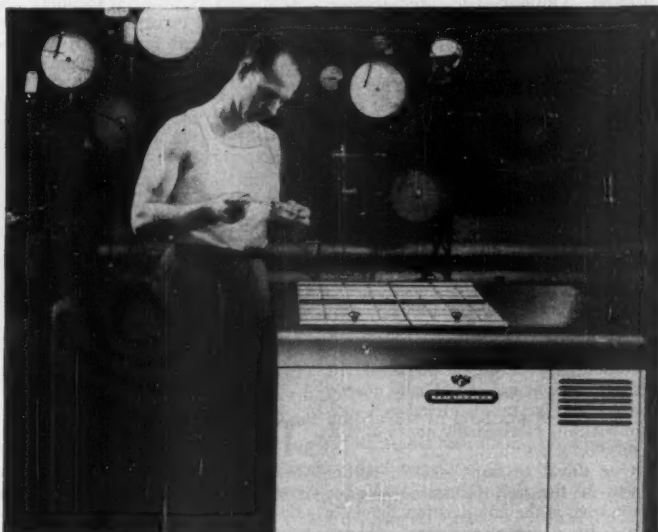
Whether your product testing demands Arctic cold, desert dryness, or immaculately dust-free air, your best bet is Frigidaire equipment. Why? First of all, because you're sure of getting exactly the *right kind* of equipment—quickly. Frigidaire makes over 400 refrigeration and air conditioning products—most complete line in the industry. And Frigidaire's famous quality means dependable operation—day in, day out—for many years.



Lubricating oils are given pour tests at 30° below zero in this Frigidaire Low-Temperature Cabinet. Plant manager of the oil company says, "Our Frigidaire equipment certainly gives us the really dependable operation we need."

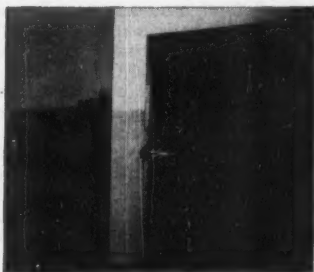


Various materials are speedily analyzed with this prism-type spectrograph. It vaporizes minute amounts into a high-voltage spark and permits accurate analysis of kind and quantity of component elements by the colors in the spark. The exact control of humidity and dust so necessary to this delicate operation is provided by a Frigidaire Self-Contained Air Conditioner.



Plastics, rubber, and other materials are tested here to determine how sub-zero temperatures affect their characteristics. The same cabinet is also employed in testing electric motors and other elec-

trical equipment. Actually, this is a standard Frigidaire Ice Cream Cabinet. It's more than adequate for the testing job—and, it's considerably less costly than a special test fixture.



Engines, radiators, batteries, etc., are tested at temperatures ranging to 40° below zero in this insulated room. The refrigeration is provided by a big, rugged 20 hp Frigidaire Compressor.

Frigidaire reserves the right to change specifications, or discontinue models, without notice.

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Over 400 Refrigeration and Air Conditioning Products for Offices  
Laboratories • Processing • Precision Assembly • Storage  
Plant Lunchrooms • Medical Departments • Water and Liquid Cooling

For the best answer to refrigeration or air conditioning problems, call your Frigidaire Dealer, Distributor or Factory Branch. Get a *free* Refrigeration Security Analysis of your present refrigeration costs and future needs. See name in Yellow Pages of phone book, or write Frigidaire Division of General Motors, Dayton 1, O. In Canada, Leaside (Toronto 17), Ont.

ing—and housing shortages are critical. In this class are Solano County, with four big military bases; Vallejo, near the Mare Island Naval base; and the Vacville area, near the Fairfield Air Base.

• **Good Year**—Arizona is having a good year. Three main factors are responsible: increased defense activity (particularly aircraft); increased activity in copper mining and refining; and increased construction.

In Utah, Ogden, Salt Lake City, and, particularly, Tooele are strong points. At Tooele, hiring at the Dugway proving grounds has brought a sharp increase in population—and a critical housing shortage. One of the weakest spots in the region is Price, Utah, where coal mines producing domestic fuel are operating only one day a week.

• **Farm Outlook**—The farm-income outlook for the region is still uncertain. Good farming weather in the past six weeks has largely erased the threat posed by a dry, even droughty, winter. Effects of the drought still linger only in southern California and Nevada and southeastern Utah.

Income will be only fair in the fruit-growing areas of the Northwest. The warm winter shortened the dormant season, and then a late freeze took its toll. The Yakima area was hardest hit; California and western Oregon areas came out best.

• **Income Leaders**—Biggest income producers this year—granted a break in the weather—will be cotton and meat. The cotton crop is expected to break all records, with acreage practically double last year's. Livestock wintered well, and numbers are substantially above a year ago.

One threat to farm income, particularly in the rich Central Valley of California, is the Immigration Service's drive to deport "wetbacks" (illegal Mexican immigrants). To the degree that it succeeds, farm labor will be short, and farm labor costs will be higher.

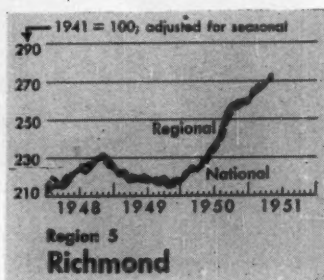
• **Building**—Biggest new-plant news comes from the aircraft companies: Convair will spend \$30-million at Pomona to build integrated missile-production facilities; Douglas will spend \$8-million on expansion at El Segundo, \$1.2-million at Santa Monica; Lockheed is spending \$8-million on expansion this year. Kaiser-Frazer's aircraft division is doubling the size of its Oakland plant, will add 300 workers. Aerojet will hire 500 at its new rocket plant near Sacramento.

Union Oil plans to spend \$164-million on expansion in southern California, and C. F. Braun, maker of refinery equipment, \$2-million. Elsewhere in California, Kaiser Steel is spending \$25-million on expansion at Fontana, and Koppers is building a new \$5-million

plant there. Calaveras Cement will spend \$24-million on expansion at San Andreas; Western Gear Works is building a \$2-million plant at Belmont; Flintkote plans a \$2-million box factory at San Leandro.

• **Northwest**—In Washington, Harvey Machine Co. is building a \$15-million bauxite-reduction plant at Longview; GE is spending \$4-million on a new radiochemistry lab at Richland; Spokane Portland Cement is spending \$34-million to expand its Irvin plant. National Plywood plans a \$1.2-million plant at Port Angeles, and the newly formed Columbia Plywood Assn. plans a \$2-million plant near Portland, Ore.

At Woods Cross, Utah, Phillips Petroleum is building a \$10-million cat cracker. General Fibers will open a 100-man yucca-fiber plant at Kingman, Ariz. And Westvaco is spending nearly \$5-million at Pocatello, Idaho, to build a fourth electric furnace for the manufacture of elemental phosphorus.



THE economy of the region has leveled off in recent months; the over-all rise in business and employment has just about come to a standstill. Textile industry backlogs have been shrinking steadily. This is due partly to the mills' unwillingness to accept new orders pending clarification of price ceilings and partly to poor spring business at retail, which has piled up inventories at all levels. Furniture industry backlogs are also down; many retailers, finding themselves way overstocked, have been canceling orders or asking deferment of shipments.

• **Jobs**—Strongest spots in the region from an employment standpoint are Richmond, Norfolk, and Charlotte. Baltimore is close behind; the pinch on skilled machinists and engineers is worse there than anywhere else in the region. Employment at Glenn L. Martin, for instance, has more than doubled in the past year, from 7,000 to 14,500, and another 4,000 will be added in the next few months.

At the other end of the scale, Cumberland, Md., is still the region's weakest spot; the only thing that seems to be able to reduce unemployment there is

outmigration. West Virginia continues to gain ground, with increases in manufacturing and trade employment more than making up for the drop in coal-mine payrolls.

• **Crops**—The region's farm-income prospects are mixed: The northern half should do well; the southern half only fair to poor. The Carolinas and southern Virginia have been hit hard by a severe drought that has hurt grains and fruit and slowed cotton germination.

Despite the drought, South Carolina may reap a good peach harvest—especially important around Spartanburg. The region's apple crop is expected to be good, particularly in Maryland and West Virginia.

Livestock income will be good throughout the region—with prices higher, numbers are up approximately 10%.

• **Plants**—South Carolina seems to be entering a new boom period of textile-mill expansion. Among projects announced recently: Belton, Peerless Mills, \$2-million expansion; Bishopville, Reeves Bros., \$2-million mill; Greenville, Stone Mfg., \$2-million mill; Laurens, Woonsocket Worsted, 500-man mill; Marietta, Deering, Milliken & Co., \$1-million, 300-man plant; Rock Hill, Celanese Corp., new \$20-million plant; Whitney, Naumkeag Steam Cotton, 200-man expansion; Williamstown, Tectron, \$1.2-million mill. At Harleyville, Giant Portland Cement plans a \$1-million expansion. Civilian employment at the Charleston Naval Base is more than 8,000 (double the postwar low) and still rising. And it's rumored that the government will spend \$10-million to expand Fort Jackson, near Columbia.

In North Carolina, Berkshire Knitting Mills is building a \$3-million, 325-man plant at Andrews; Henfine Mills plans a 1,000-man plant near Durham; Cornell-Dubilier will build a \$14-million electrical manufacturing plant at Fuquay Springs; Harriett Cotton Mills plans a \$2-million expansion at Henderson; American Thread Co. will build a \$3-million, 1,200-man plant at Marion.

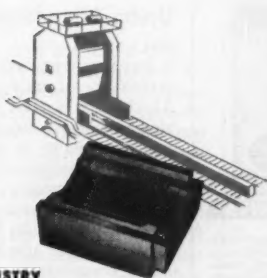
• **Virginia**—In Virginia, Manchester Board & Paper is building a \$4-million plant in Richmond; Continental Can plans a \$74-million expansion at Hopewell; Monroe Calculating Machine is spending \$2-million on a 500-man expansion at Bristol; and American Cyanamid is building a 500-man plant at Carbo.

In West Virginia, Vanadium Corp. is building a \$7-million silicon alloys plant at New Haven; Libbey-Owens-Ford a \$2-million fibrous-glass plant at Parkersburg; and Celanese a \$1-million plant at Point Pleasant. Westinghouse is building a \$4-million plant and laboratory at Friendship Airport, between Baltimore and Washington.



When full productive capacity  
is a "MUST"

# micarta is basic!



STEEL INDUSTRY

MICARTA toughness improves steel production. It is found in roll-neck bearings, run-out tables, pickling lines, hold-down rolls, punch rolls, and insulators. This workable plastic is solving problems in all industries. Have you got a place for it?

Look to MICARTA\* for help in getting and keeping full production. In working longer and better in vital machinery it helps keep things going at top speed. It is a basic material which does many jobs more efficiently than metal.

MICARTA is lighter than aluminum . . . and pound for pound, has a compressive strength greater than structural steel. It cannot rust.

MICARTA resists heat and cold . . . acts as a quencher for noise and vibration. It makes an ideal insulator.

Explore this solid and workable plastic. It can be machined, formed, or fabricated easier and more economically than metal. Westinghouse Electric Corporation, Micarta Div., Trafford, Pa.

J-06443





## I'm Glad my Boss Waited for STEEL AGE

It's been proved time and again that stenographers do more work and better work at a Steel Age Stenographer's Desk! Everything about it is designed for unsurpassed comfort and convenience. Today, there's a record demand for Steel Age. If you should have to wait for yours, the extra years of

service and pride of Steel Age ownership will make it more than worth your while!

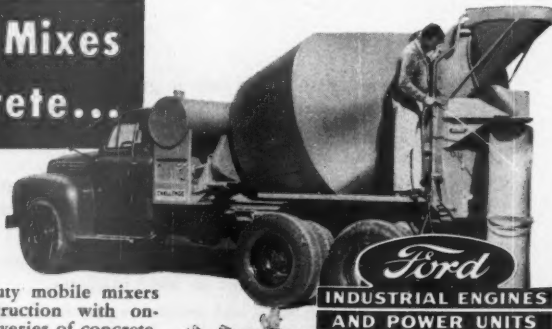
**Steel Age**

At Leading Office Furniture Dealers from Coast to Coast

**CORRY-JAMESTOWN MANUFACTURING CORP.**  
Corry, Pennsylvania

*Master Craftsmen of Steel Office Furniture*

## Ford Mixes Concrete...



• Heavy duty mobile mixers speed construction with on-the-spot deliveries of concrete. Here, as in many other applications, Ford Industrial Power has been a long-time favorite for dependable, low-cost operation.

Ford Industrial Engines and Power Units are available in five models from 4-cylinder, 120-cu. in. displacement to V-8, 337-cu. in. displacement. Applications of Ford Industrial Power, especially important at this time of building for defense, include:

HOISTS • SWEEPERS  
DRILLING RIGS • GENERATOR SETS  
COMPRESSORS • PUMPS

**YOUR JOB IS WELL-POWERED  
WHEN IT'S FORD-POWERED**

Heavy duty "Challenge" transit mixers of 4 to 6½ cubic yard capacity, made by the Challenge Manufacturing Co., are powered by Ford "226" 6-cylinder Industrial Engines, with Ford Clutches and Transmissions.

INDUSTRIAL ENGINE DEPARTMENT  
**FORD MOTOR COMPANY**  
18080 Woodward Ave., Highland Park 3, Mich.

I am interested in Industrial Power for:

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Send me new 1951 literature on Ford Industrial Power

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(Please print)

06

## READERS REPORT

### "Hassle" Hunt

Sirs:

On page 152 of BUSINESS WEEK dated May 5, 1951, there is a sentence as follows: "The raw materials hassle brought to the limelight by Bevan's resignation is still hot."

The word "hassle" is unknown to anyone I have asked and also to me, and I wonder if you would tell me the meaning of it, merely to satisfy my curiosity. I looked it up in both our English and American dictionaries and was unable to find it. I am very much interested in words and their meanings, and I should appreciate it if you would let me know.

KATHLEEN M. SHAW

SAINT JOHN, N. B.,  
CANADA

• As Reader Shaw found out, the authorities seem to turn their noses up at hassling. BUSINESS WEEK researchers haven't been able to discover the word in any dictionary, including those of American slang. Unimpressed by this, however, people have been using it for some years. Some habitues think that it started in the sports field, a theory that deserves at least some credence from its common usage. Hassle (used as either verb or noun) is synonymous with wrestling or struggling—in which sense it pretty aptly describes what's going on in raw materials at the international level.

### Union Attendance

Sirs:

BUSINESS WEEK's interpretation of low attendance at union meetings [BW—May 26 '51, p38; Jun. 2 '51, p31] seems to stand on highly disputable grounds. To me, it seems to be part of the general professionalization of many civic and social tasks, formerly actively carried out by the lay membership of organizations. The obverse of this trend, of course, is the "inactive spectator" attitude so much complained of as a degenerative agent of the democratic process.

From the standpoint of the internal working and the representative character of the union movement, low attendance may appear unhealthy. But is it not also evidence of much less need on the part of today's members, as compared to their predecessors, to seek the shelter of group solidarity? Is it not evidence of the establishment of a modus vivendi in the daily relationships between members of management and unions, based on managerial acceptance of unions as a permanent part of our social institutions?

No doubt management anti-union

drives would, and in the past did, swell union attendance. But surely management propaganda for such attendance would smack of paternalism obnoxious even to union leaders anxious to fill their halls.

K. H. STEIN

NEW YORK, N. Y.

Sirs:

I read with interest the two Labor Angles you carried recently on attendance at union meetings. I think you have a valid point in that employers as a group must bear the major responsibility for this unfortunate state of affairs.

I seem to recall, however, that at least one important employer recognized this fact and did something about it. That was the Allis-Chalmers Co. in Milwaukee, which, *BUSINESS WEEK* reported some time ago, signed a novel contract with its union requiring some form of member participation in union affairs. Is this contract still in force?

GEORGE P. LYTTLETON

BOSTON, MASS.

• You're right. The Allis-Chalmers contract to which you refer (BW—Jul. 15'50,p88) is still in force. For a report on how it is working, see page 38.

## Case for Trucks

Sirs:

I just read with an interest that is probably biased, your item recording that the Assn. of Western Railroads liked so much the antitruck findings of the Kansas Highway Commission that they were distributing copies of it [BW—May 19'51,p28].

I am biased, but I am sure that *BUSINESS WEEK* is not and that you will be quite willing to report that the Automobile Manufacturers Assn. likes equally well the enclosed booklet, "The Case for Heavy-Duty Trucks," which we recently published and sent to them. I received today a letter from Mr. Karl M. Richards of the Automobile Manufacturers Assn. saying that our book will be used as "an important contribution in our present drive to gain public recognition of the essentiality of motor trucks."

ROBERT F. WOOD

ADVERTISING MANAGER,  
THE AUTOCAR CO.,  
ARDMORE, PA.

## Smock Strike

Sirs:

To me, the Chrysler smock strike [BW—Jun. 9'51,p40] is just more evidence of the way unions build up trivial issues to turn workers against employers.

The objection to smocks appears to be an entirely artificial one. I have

The man to see is your \* \_\_\_\_\_ dealer!

Why not talk to your \* \_\_\_\_\_ dealer today?

See \* \_\_\_\_\_ at  
your dealer's now

Call the \* \_\_\_\_\_  
Service office  
nearest you

Go to your nearest  
\* \_\_\_\_\_ dealer

Get an entry blank  
from your \* \_\_\_\_\_  
dealer today



\*The manufacturers or brand names are deleted from these actual statements.

## Does your advertising really point the way to your dealers?

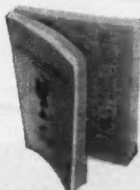
Do you use a statement like one of those above in your magazine, newspaper, radio or television advertising?

You can make it lots easier for prospects to find your authorized dealers if you'll use a definite statement like this:

"You can find the (your name) dealers listed in the 'yellow pages' of your Classified Telephone Directory."

By using Trade Mark Service in the 'yellow pages' of the telephone directory, prospects will know *where* your dealers are located. Your trade-mark and local dealers can be displayed in all telephone directories that cover your markets.

This identification plan is the ideal link between your advertising and your authorized dealers or distributors.



Trade Mark Service really helps turn prospects into buyers... makes your advertising dollars bring you more results.

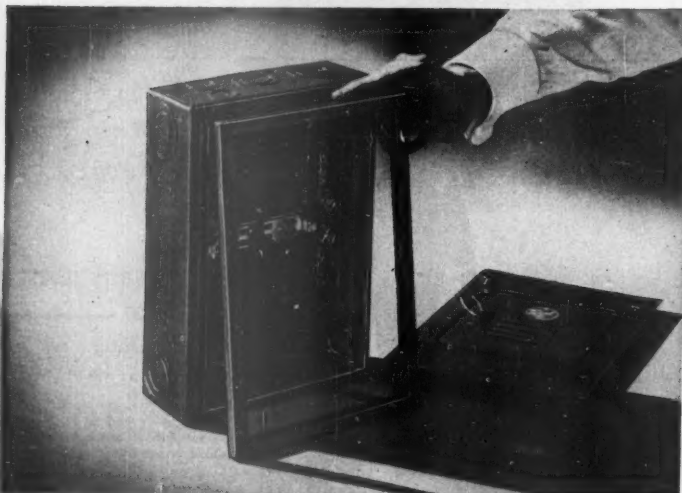
AMERICA'S BUYING GUIDE FOR OVER 60 YEARS

FOR FURTHER INFORMATION, CALL YOUR LOCAL TELEPHONE BUSINESS OFFICE OR SEE THE LATEST ISSUE OF STANDARD RATE AND DATA.



# FRAMED

## ON TWO COUNTS!



New Federal Noark Combination Enclosure with its picture-type frame.

**ANOTHER FIRST BY FEDERAL NOARK!** An electric panelboard enclosure that's *framed* . . . to cut wholesalers' stocks . . . to cut consumers' costs.

It has always been necessary to manufacture two types of panelboard enclosures . . . one for surface mounting directly upon a wall, the other for flush mounting *within* a wall. About a year ago, Federal Noark perfected a dual-purpose enclosure . . . its unique "frame" design ideally adapted for both methods of installation.

### New Noark Combination Panelboard Enclosure

First, of course, this new Noark enclosure meets the stringent safety requirements of Underwriters' Laboratories, Inc. The enclosure is delivered with the frame in place, ready for surface mounting. For flush mounting, the frame is removed and ample space thus provided for plastering. With only one type of enclosure to stock, wholesalers can slash inventories yet carry a full line of sizes for immediate delivery. With increased production on one design, manufacturing economies help keep Federal Noark panelboards low in cost.

### Outstanding Leadership

During the last few years Federal Noark has become an outstanding factor in the design and manufacture of electrical control equipment. Many Noark products offer such distinct advantages to electrical distributors, contractors and consumers that Noark volume has doubled and redoubled. Five Federal Noark plants from coast to coast are today operating at top capacity.

### FEDERAL ELECTRIC PRODUCTS COMPANY

Main Office: 50 Paris Street, Newark 5, N. J.

# FEDERAL NOARK

Plants at Newark, N. J.; Long Island City, N. Y.; Hartford, Conn.;  
St. Louis, Mo.; Los Angeles, Calif.

**FEDERAL NOARK  
MEANS  
BUSINESS!**



worked in what amounts to a smock—a laboratory apron—for 23 years. My barber wears one. So does the butcher, a burly Irishman, at the neighborhood market.

Nobody ever called me effeminate for wearing mine. I guarantee nobody ever called Sam, the butcher, a sissy without getting socked for it.

I don't believe anybody would ever call an auto worker effeminate, no matter what he put on. So it seems apparent that someone in the union told the workers that, because they asked for coveralls, they shouldn't accept anything else but coveralls from the employer.

JAMES A. SULKY

BUFFALO, N. Y.

• Reader Sulky, his barber, and Sam the butcher wear garments that look somewhat like a smock—but are called aprons.

AS BUSINESS WEEK pointed out, what Chrysler's smock-wary employees objected to most of all was the word "smock" applied to the suggested work garment. By looking at Webster's definitions of "smock," readers will recall the occasional use of the word to describe a woman.

## Post-Tax Picture

Sirs:

On page 68 of the May 19 issue of your very interesting magazine, you present a table of compensation of the top officers in various large companies. The inference is that Mr. Charles E. Wilson of General Motors receives 6.5 times as much as Mr. Holmes of Swift & Co. Inasmuch as under present income tax laws the recipients of large incomes have become merely temporary custodians of a large percentage of their incomes, which they speedily hand over to the Collector of Internal Revenue, it seems to me that an approximation of net after income tax would give a much truer picture of the situation.

For instance, in the table below I have assumed that each individual is married, has one dependent, and takes advantage of the split-income provision of the law and that his spouse has no income of her own. Your table then becomes:

| Name                 | Total Compensation<br>Times Mr.<br>Holmes | Compensation<br>after Tax<br>Times Mr.<br>Holmes |
|----------------------|---|--|
| Charles E. Wilson... | 6.52                                      | 2.88   |
| Eugene Grace.....    | 4.64                                      | 2.36   |
| Lingan Warren.....   | 3.68                                      | 2.08   |
| K. T. Keller.....    | 2.51                                      | 1.66   |
| G. A. Price.....     | 2.16                                      | 1.57   |
| W. S. S. Rodgers.... | 1.71                                      | 1.38   |
| B. B. Jennings....   | 1.46                                      | 1.26   |
| Frederick Specht.... | 1.03                                      | 1.02   |
| John Holmes.....     | 1.00                                      | 1.00   |

FRANK G. DARLINGTON

SEWICKLEY, PA.



*I can't hear you—  
what did you say?*



*I said you need a  
**FIBRETONE\***  
Acoustical Ceiling!*



**Cut down on distracting noise . . . increase efficiency!**  
Fibretone Acoustical Panels can be quickly installed  
in new construction or over existing ceilings.

● Today, it is an established fact that distracting noise greatly cuts down on office efficiency. That is why acoustical ceilings are a specified part of practically all new office construction. But, even if your present offices were built before the development of sound control, a Johns-Manville Acoustical Ceiling can be quickly installed over your old ceiling with minimum interruption to regular office routine.

Whatever your noise problem, whatever kind of building, there's a J-M Acoustical material that is *exactly right* to give you the best in noise quieting.

One of these products is FIBRETONE—12" square panels of sound-absorbing materials in which hundreds of small

holes have been drilled. These holes act as "noise traps" where sound energy is dissipated. It is pre-decorated, can be painted and repainted, and is *low in cost!* Also available in flame-resistant finish.

Other J-M Acoustical ceilings include Permacoustic, textured noncombustible tile, Transite® Panels, made of fire-proof asbestos; and Sanacoustic® Units, perforated metal panels backed with a noncombustible, sound-absorbing element.

For a complete free survey by one of our sound-control experts, or an informative free book on "Sound Control," write Johns-Manville, Box 158, Dept. BW, N. Y. 16, N. Y.

\*Reg. U. S. Pat. Off.



**Johns-Manville**

Moveable Walls—Terraflex and Asphalt Tile Floors—Corrugated Transite®—Flexstone® Built-Up Roofs—Etc.

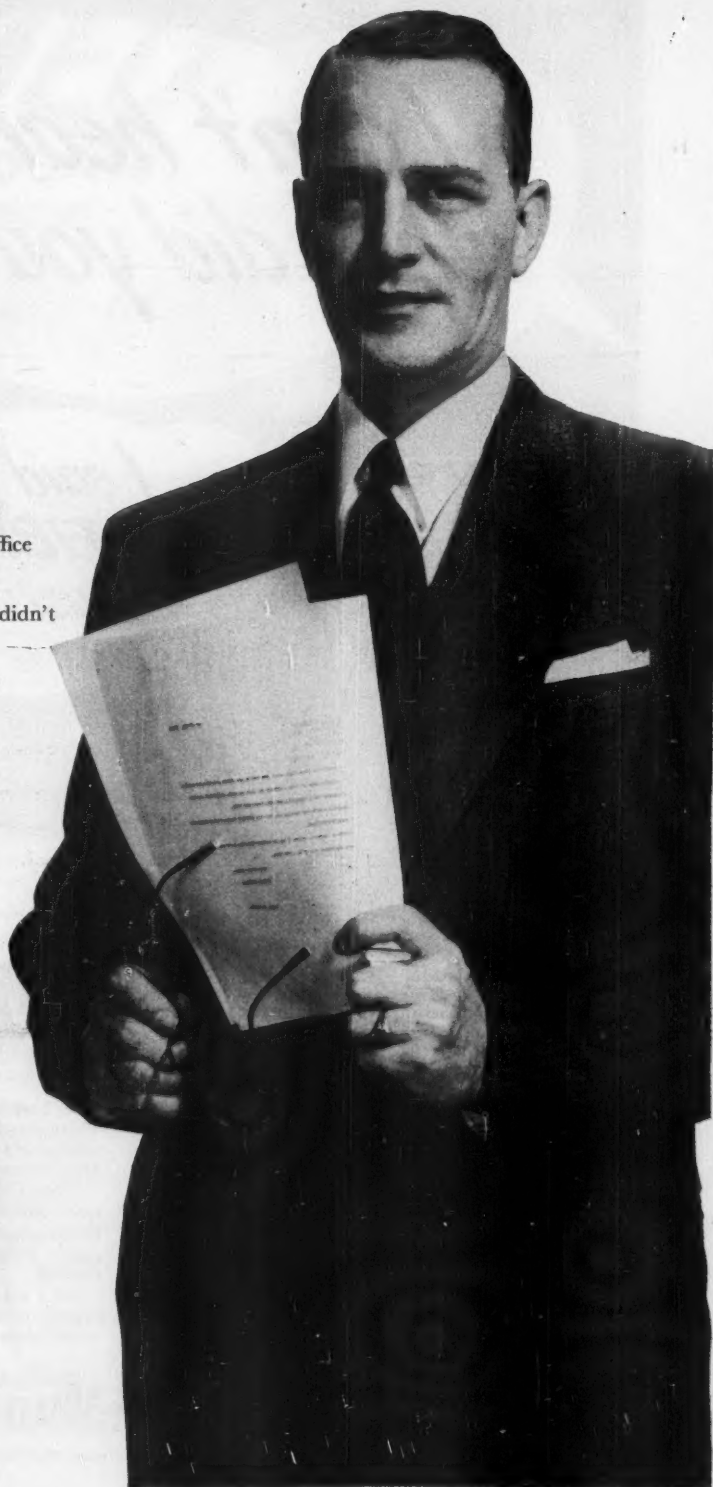
Before this Carrier Weathermaker\* was installed, heat and humidity had the office bogged down. Schedules were off. Errors were frequent. Employees often didn't show up. But now that the air is crisply refreshing, more work gets done efficiently . . . absenteeism is no longer a problem . . . morale is high. In offices, drafting rooms, laboratories, machine shops, restaurants and stores, Carrier Weathermakers are getting things done *faster, better, cheaper.*

\* Reg. U. S. Pat. Off.



**THE NEW CARRIER ROOM AIR CONDITIONER  
FOR YOUR HOME OR OFFICE**

You can choose your weather to fit the day—sleep relaxed, work refreshed no matter how high the thermometer goes. Quickly installed. Easily moved. Choice of custom colors.



Here's what he said:

*Hot weather hasn't slowed us down a bit*

Here's why he said it:

*The New Carrier Weathermaker*

Here's why he installed one:

*Only the Weathermaker gives you all these advantages:*

**1. EXCLUSIVE CONTROLLED COOLING**

Avoids that clammy feeling. Controls and balances temperature, humidity, ventilation, and air motion for real working efficiency.

**2. EXCLUSIVE HUMITROL**

Removes more moisture from the air on sultry days . . . and dries the air on mild, muggy days when less cooling is required.

**3. EXCLUSIVE EVEN-FLO AIR DISTRIBUTION**

Revolutionary advances in design assure superior air conditioning without "dead spots" or drafts.

**4. EXCLUSIVE WHISPER-QUIET OPERATION**

Revolutionary Q-T fan and completely sound-insulated cabinet are two of many reasons why you scarcely know it's running.

**5. HERMETIC COMPRESSOR**

Completely sealed. No exposed moving parts, no belts to wear out, nothing to oil or adjust.

**6. LOW OPERATING COST**

Large, sloping cooling coil, oversize air filters, and other exclusive features contribute to great savings in electricity and water consumption.

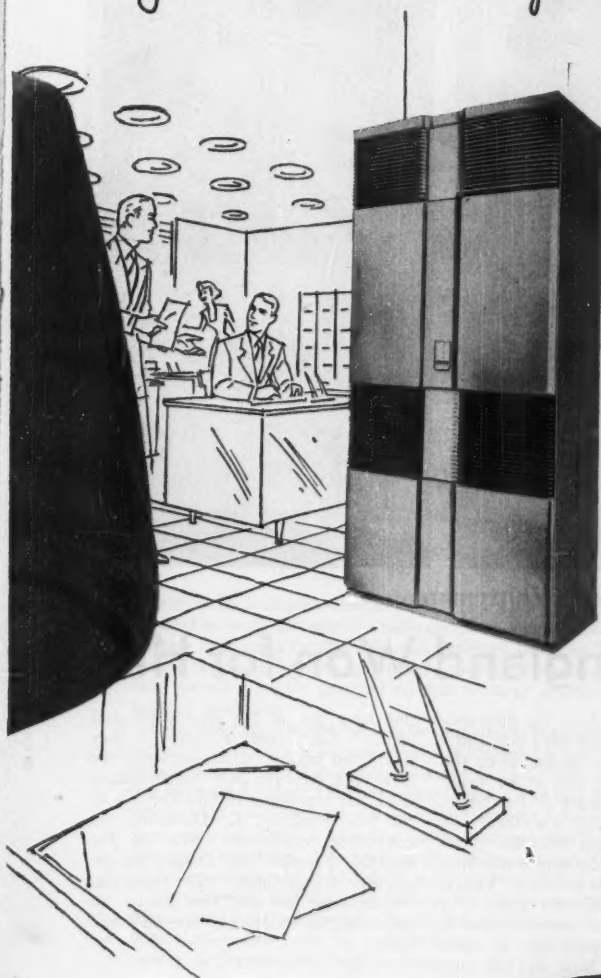
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In many cases, it pays for itself within two years. In every case, it helps boost employee efficiency and morale. That's something to consider these tense days. And notice how compact it is—designed for quick installation in a matter of hours, without expensive ductwork. For information, see your Carrier dealer, listed in the Classified Telephone Directory. Or write Carrier Corporation, Syracuse 1, New York.



AIR CONDITIONING

**Carrier**

REFRIGERATION

# NAMES AND FACES



Laurence Frederick Whittemore



## Railroad Plus New England Won for Him

Ever since World War I, economists have been running a cold eye over the railroads, wondering if they were ready for the "declining industry" classification. And for about the same length of time they have had the "declining region" tag ready for New England.

Combine railroads and New England, and you have something that is a mighty long way from a sure shot in the eyes of the average businessman.

• **Daily Double**—But Laurence Frederick Whittemore bet his chips on both railroads and New England years ago—and walked off with the daily double.

Today at 55 Whittemore has a job he doesn't really need just because the others paid off so well. Yet to him being

president of Brown Co., big pulp-and-paper firm, is "the best job I ever had."

The reason is that he has loved the woods ever since he was a boy living on his uncle's wood lot in Pembroke, N. H. Whenever he gets a chance, he takes his portly figure into the 3-million acres of North Country timberland owned by Brown. He knows the loggers and their work well and puts in a hand to help them whenever he is around. He also knows how to make the woods work for him. He has been president of Brown Co. since early 1950. Its net since then has leaped from \$1-million a year to \$4-million.

• **Feudal Landlord**—Whittemore's previous job was one that most men would

not have got in the first place and couldn't have stood up under if they had. That job was the presidency of the New York, New Haven & Hartford Railroad. He was asked to take the job by the late Frederick C. Dumaine, the controlling stockholder, who ran the road like a feudal lord. Despite his implacable disagreement with Dumaine, Whittemore ran the New Haven his way—until he resigned a year and a half later.

### I. Young Man in a Hurry

But even before he got to the New Haven, Whittemore had done well enough betting on New England and



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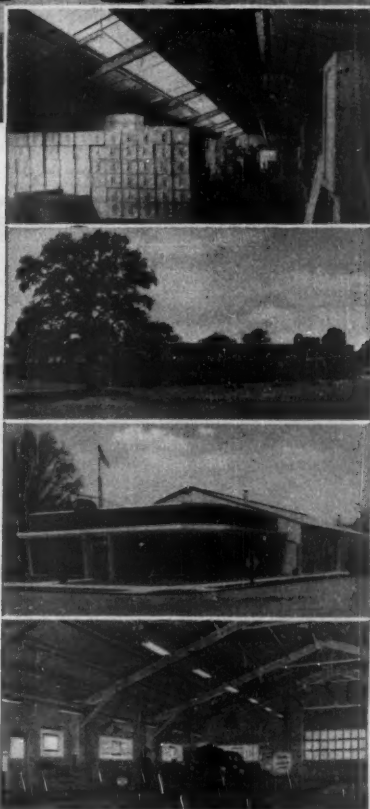
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There's an AAF representative near you. Consult your telephone directory or write: American Air Filter Company, Inc., 387 Central Avenue, Louisville 8, Ky.



Soiled paper would mean lost dollars in this plant. The protection of AAF electronic precipitators makes clean air cost less than dust.

**AAF**

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another railroad not to have many financial worries.

Orphaned at seven, he was raised by an uncle and aunt who helped him through Pembroke (N. H.) Academy. At 18, young Whit got a job as a laborer in the Boston & Maine Railroad shops in Concord.

Four years later, he quit to enlist for World War I. But he never got overseas with his regiment—he went down with spinal meningitis instead. By the time he recovered (they had just learned how to control it), the fighting war was over.

• **Into Figures**—Now Whit was a young man in a hurry. He went back to the railroad shops, but he stayed only a few months. He applied for a job as a municipal accountant with the New Hampshire State Tax Commission. He got it—largely because his grandfather had been a judge and his great great grandfather an early settler and the first minister of Pembroke. New Englanders set store by such history.

But Whittemore didn't rely on ancestry to keep the job—although it turned out to be a happy combination of the Harvard Business School and the Racquet Club. The boy saw magic in figures. Here he could study the most intimate figures of every corporation, big and small, that did business in New Hampshire. He taught himself the infinite nuances of profit and loss. And he met the right people, in the right way.

• **Another Change**—Because of figures' fascination for him, Whittemore learned fast. Within a short time he convinced New Hampshire's cities and towns that they ought to simplify their higgledy-piggledy bookkeeping. Three years after he went with the commission, its head, ex-Gov. Charles Floyd, appointed Whittemore to settle the estate of a lumberman named Fellows.

After he did that job, Whittemore stayed on as general manager of Fellows & Sons from 1922 to 1925. It was a \$1-million business, with sawmills, a box factory, a casket factory, and an 1,800-acre farm. Best of all, it took Whit back to his first love: the woods. When he wasn't at his desk dreaming up one of the first incentive pay systems in the U.S., he took off to tramp the woods and streams with his loggers.

• **Full Commissioner**—When Whittemore left the company in 1925, it was making money. Back at the tax commission, he was now a full-fledged commissioner—and secretary to boot. He began to move around in the big leagues. It was here that he met the brassy, testy man who was to give Whit the most mercurial adventure of his business career—Frederick C. Dumaine, then treasurer of Amoskeag Mills.

By this time Whittemore was representing the tax commission in liti-

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The core is a remarkable chemical compound (*not glass*)—Kaylo hydrous calcium silicate. Not only is it incombustible (so rated by Underwriters' Laboratories), but its billions of sub-microscopic air spaces retard the passage of heat, protecting life as well as property.

Kaylo calcium silicate, researched since 1938 by Owens-Illinois, and introduced in 1943, has high dimensional stability, strength and light weight; is inorganic and insoluble in water. It is a *proved* material with demonstrated superiority for a wide variety of uses including insulating roof tile and heat insulation as well as core material for doors and panels.



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gation. He had cut his teeth as a referee appointed by the Supreme Court of New Hampshire in a row between the Connecticut Valley Lumber Co. and the town of Stratford. The two had landed in court over the assessment on 8,000 acres of Connecticut Valley's timberland, and it was the biggest timber tax-law suit New Hampshire had ever had. The outcome was successful for referee Whittemore: Neither side was wholly pleased with his decision.

## II. The Railroad Aristocracy

The next suit found Whittemore in a fight that was to make him a railroad man for much of the rest of his business life. This time it was the Boston & Maine Railroad going to bat over an assessment. No less a man than the railroad's president, George Hannauer, pleaded the case for the railroad. Whittemore represented the state of New Hampshire.

When the state won, Hannauer decided Whittemore was a young man he'd rather have on his side. The president asked Whit to represent the railroad in its local dealings in Maine, Vermont, and New Hampshire. While Whit was winding up his commission affairs, Hannauer died.

• **Tea Parties and Roundhouses**—Ned French, new B&M president, stood by the agreement. Whittemore began to practice public relations as well as management for the railroad up and down New England. One important thing about Whittemore, French noted, was that he not only belonged to—and in—Boston's stately Algonquin Club; he was at home in the roundhouse, too.

French could use these qualities in the year 1932. Railroad men were a conscious aristocracy of strong, silent men—and in a year like 1932, strong, silent management was catching it from all sides. To French, Whittemore was the answer: He brought him into Boston as his assistant.

• **The Buildup**—Right away Whit got busy. He was a prime mover of the first advertising campaign of the Assn. of American Railroads and a lively member of its advertising committee. On top of that, he began building up the B&M. The railroad had been operating buses and trucks since 1925; Whit figured they should add an airline so they could offer the public the works in transportation. He persuaded his bosses to put up the money to found what was to become Northeast Airlines.

It began more modestly—as Boston-Maine Airways.

Soon B-M was running regular flights. But Whittemore wasn't satisfied with his bookings; people were still scared to fly. He figured that much of it was due to the fact that a lot of businessmen were staying on land because of their



"BEST JOB I ever had," is how Whittemore rates the timber and pulp business.

wives' timidity. He took Amelia Earhart barnstorming through the women's clubs of New England to give the ladies a little spunk.

Whether or not that was responsible, B-M's business picked up fast. By 1935 it took the name Northeast Airlines. And by 1945, when Civil Aeronautics Board ordered B&M to divest itself of its airline (Atlas Corp. bought it), the line had netted the railroad \$800,000.

## III. The Big Jobs

By that same year, Whittemore was as prominent a fixture in New England as the airline he had built. He sat on boards of the Brown Co., the St. Lawrence Power Co., Textron, Suncoke Mills, the New England Power Co. A rather passive Democrat, he was on speaking terms with the politicians in a strongly Republican area. He was also ready for a big job.

• **Federal Reserve Head**—In 1946 he got it. He was named president of the Federal Reserve Bank of Boston, of which he had been a director since 1944. Now he could be—and was—a man with a mission: to wake up New England to its importance in the industrial life of the U.S.—and to wake up the rest of the U.S. to New England. Whether he did or not is somewhat of a question.

But to Whittemore it was a satisfying life—and so he thought twice about giving it up on that spring day in 1948 when he heard from Frederick C. Dumaine. Seriously ill in a hospital, Dumaine told Whit he needed him badly—as president of the New Haven.

• **Promise**—Whittemore hesitated, even though he had known Dumaine for 25 years and was fond of him personally. But it was a big job, and Dumaine had promised Whittemore that he could



# STRETCHING

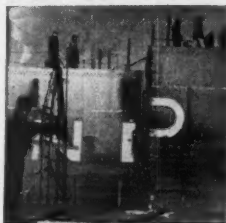
a ship stretches steel supply . . .

**Inland boosts ore carrying capacity by adding 72 feet to the *Philip D. Block***



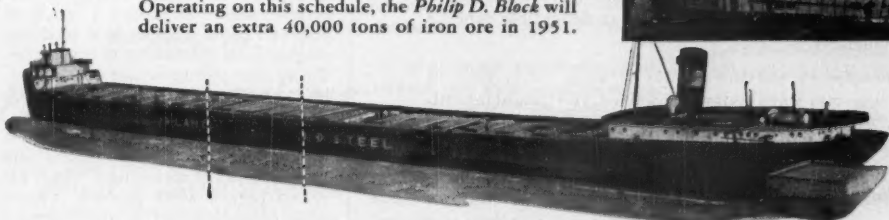
40,000 more tons of much-needed ore is made available to Inland Blast Furnaces each year.

**1** A "before" photo of the *Philip D. Block* showing where ship is to be cut in half. This ship, built in 1925 had an overall hull length of 600 ft. Lengthening will bring the *Block* to within 6 ft. of the new *Wilfred Sykes*, Inland's flagship and largest vessel on the Great Lakes.



**2**

Ship has been opened amidships, floated apart and is ready to receive new 72 ft. midsection. Addition of this section will give the ship an average carrying capacity in excess of 14,000 gross tons. Previous average tonnage was 12,800. In a normal lake shipping season, this vessel will make 33 complete round trips between the ore docks at Superior, Wisconsin, and Inland's mill at Indiana Harbor. Operating on this schedule, the *Philip D. Block* will deliver an extra 40,000 tons of iron ore in 1951.



**3**

New mid-section is in place and reconstruction complete. Total time in drydock: 100 days. The *Philip D. Block* has since joined her four sister ships, and the many other lake ore carriers, in the important task of supplying iron ore to a nation counting more than ever on a big year in steel. The lengthening of the *Philip D. Block* is just one more step in a continuing modernization and expansion program at Inland.

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run the railroad his own way. He accepted.

When Dumaine recovered, the New Haven actually had two strong, totally different men at its throttle. Whittemore believed that management had obligations to all its stockholders. Dumaine disagreed. And he liked publicity even if it was bad, which it invariably was. Similar differences existed between the two on all other matters. And even though they were close friends, neither ever succeeded in changing the other's mind one iota.

• **The Fine Print**—By the end of 1949, the disagreement between the two became basic. A stockholders' meeting was coming up. It was Dumaine's railroad, and this time he meant to run it his own way. Whittemore had read the fine print: As president of the line, he would have to share the responsibility for whatever happened. He wrote his resignation, had it waiting for Dumaine when the latter came back from another siege in the hospital.

## IV. Back to the Woods

Just before he did turn in his resignation, Whittemore got a call from the Canadians he had been representing on the board of Brown Co. They wanted Whit either to find them a new president or be it himself. They were astounded when he said simply: "I'll take it."

First thing he did was to get Brown Co. reorganized financially. Then he set out to do to a tree what the meat packers do to a hog—use everything but the squeal. It was necessary, he felt, because he was competing with the south, where costs and taxes are low and forests still lush.

• **Research**—The result of this work is that today Whittemore presides over an enterprise of 3-million acres of timberland, plus mills making a variety of pulp and paper and chemical products, ranging from chloroform to inner soles. To squeeze still more out of his trees, he's concentrating heavily on research—both in Brown's labs and outside.

The University of New Hampshire, for example, is currently looking into the properties of spruce bark, which has always been a waste product. There's some indication that it would make a dressing for soil to discourage plant pests—spruce is immune to nearly all of them.

• **The Salty Friends**—To Whittemore, this is the most exciting and dynamic business of all—"much more than banking or railroading." He thinks it's a good life, too. He can spend more time in Pembroke, which is still home to him, with his wife and three sons, and on his own 1,600 acres of pines. Best of all, he can spend more time in the woods.



*Little dogies  
"get along" better  
because of*  
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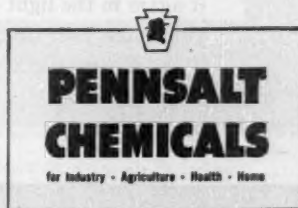
Today every healthy calf, dogie or otherwise, is guarded by modern chemicals, from range to filet mignon. Basic chemical manufacturers like Pennsalt have developed a series of sprays and dips that control lice, ticks, mites and the universal fly.

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Pennsalt chemicals are at work everywhere, boosting production of cotton,

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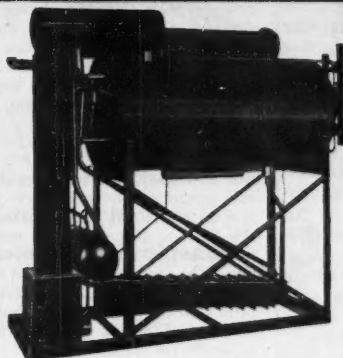
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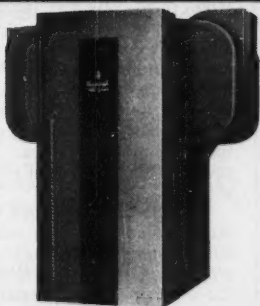


**New Servel 25-ton Water Chiller.** An economical source of chilled water for industrial processing, and of air conditioning for office buildings, hospitals, factories, defense plants. Available at the moment only for defense orders.

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## TAXES

### War Wear Speeds Depreciation

You can't overload machinery without shortening its life, and Bureau of Internal Revenue knows it. So the bureau allows quicker writeoffs—provided you can prove inevitable abnormal use.

Wangling a certificate of necessity for new defense plant isn't the only way that you can get accelerated depreciation. If you can prove to the Bureau of Internal Revenue that you are wearing out your regular machinery faster than usual, you can adjust your writeoffs accordingly. But you have to be able to lay the evidence on the line.

Defense production puts extra wear on plant and equipment. Plants that normally operate two shifts swing into three. Frequently they overload machinery, speed it up, and have to hire inexperienced personnel to operate it. Sometimes proper maintenance of machinery just goes by the boards because of shortages of men and materials.

• **BIR Takes Account**—BIR knows this and takes it into account in its tax policies.

Under normal conditions, the bureau assumes that a piece of equipment with a relatively long life expectancy will be used up in, say, 20 years. Accordingly, it permits a company owning that equipment to deduct 5% of the value of the equipment when it estimates its income each year for tax purposes. Some companies set these deductions aside in a fund; in 20 years they will have accumulated enough, theoretically, to pay for a new machine.

• **Faster Depreciation**—But in times like these, the life expectancy of plant and equipment is apt to shorten sharply. If a company can prove that its equipment is suffering extraordinary wear and tear, the bureau will allow the company to speed up its depreciation rates. In other words, the company may estimate that a machine with a normal 20-year life will now last only 10 years. BIR will let the company double its annual deductions—provided the bureau gets clear proof of abnormal and unavoidable wear. That's the hitch.

In claiming faster depreciation, it isn't enough just to show that your property was subjected to unusually heavy use. You have to prove that the working life of the property has been shortened by that use; also, that you were unable to prevent abnormal wear by maintenance.

• **Statistics Help**—It takes some pretty detailed documentation to impress BIR with your claim. Successful presenta-

tions in the past have shown operating statistics on hours in service, units produced, labor-hours or labor-dollars by plant departments. A tabulation comparing these statistics with the same figures during a more normal year goes a long way toward satisfying the bureau.

L. E. Whitman & Co. was in the concrete pavement business during the war years—paving three airfields at Pampa and San Antonio, Tex. In deducting depreciation of \$30,561.42 on its trucks and other equipment, the company used varying rates ranging from 16.23% on some items to 50% on others.

The trucks were all depreciated at the rates of 35% in 1942 and 50% in 1943. BIR contended these rates were way out of line; government rates on trucks were running as low as 12½%. But Whitman was able to show that the trucks were put to unusually hard use in an emergency operation. The company was required to use the trucks for long hours, overloaded them to twice their capacity or more. Unskilled and incompetent drivers had to be employed to handle the trucks.

The Tax Court allowed Whitman to use the higher depreciation rates on the trucks. But Whitman muffed showing the same heavy use of other equipment. The court followed BIR and required Whitman to use standard rates of depreciation on that. (Whitman, T. C. Memo. Mar. 16, 1951.)

• **Now or Never**—Failure to make a claim, or to make one successfully, not only deprives you of a higher deduction now—it deprives you of it for all time. Under BIR policy the depreciation allowance for any one year has to be based on conditions existing at the end of that year. You can't make speeded-up depreciation retroactive; you have to claim it each year as you go along.

Your deduction doesn't have to be the same amount each year. All the bureau requires is a consistent plan that meets this test: At the end of the useful life of the property, the total deductions allowed each year added to the salvage value must equal its original cost; the sum may never exceed the cost.

• **Causes of Wear**—Additional factors that can cause equipment to wear out fast are use of inferior raw materials because superior materials are not obtainable or use of equipment for other than its designed purpose.



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### **1. Q. HOW CAN YOU REDUCE INSTALLATION TIME FOR NEW POWER AND CONTROL CIRCUITS IN LIGHT INDUSTRIAL AND COMMERCIAL BUILDINGS?**

**A.** Use G-E electrical metallic tubing. This lightweight, thin-wall tubing cuts installation time because it's easy to handle, easy to bend, and easy to install.



### **2. Q. HOW CAN YOU EXPAND THE ELECTRICAL CAPACITY OF YOUR PRESENT STEEL RACEWAYS?**

**A.** By using G-E Deltabeston\* AVA cables instead of ordinary cables, you can add as much as 64% more current-carrying capacity to your present raceways.

### **3. Q. HOW CAN LAYOUT TIME BE SAVED WHEN PRESENT INDUSTRIAL ELECTRIC POWER SYSTEMS ARE EXPANDED?**

**A.** G-E Interlocked-armor cable—carrying its own flexible raceway—presents no complicated layout problems. This ready-to-install cable can be bent around obstructions, strung over long runs, laid up on existing beams, or installed on racks.



### **4. Q. HOW CAN YOU PROVIDE A COMPLETE ELECTRICAL DISTRIBUTION SYSTEM THAT WILL KEEP PACE WITH CHANGING FUTURE REQUIREMENTS?**

**A.** Install the G-E Fiberduct underfloor system—a nonmetallic, non-corrosive raceway system. You will get electrical flexibility to cope with ever-changing and unforeseen demands for expanding electrical service. You will always be ready for changes in building layout that require new or additional power and signal circuits. You keep electrically prepared with G-E Fiberduct.

### **5. Q. WHAT ARE THE ADVANTAGES OF THE G-E REMOTE-CONTROL WIRING SYSTEM IN INDUSTRIAL AND COMMERCIAL BUILDINGS?**

**A.** G-E remote-control wiring system provides control of corridor lights from central locations to assist watchmen and cleaning crews. The small, lightweight control wires can be moved easily when partitions and floor layouts are changed.

*You can put your confidence in—*

**GENERAL  ELECTRIC**



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business week...

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MORE GOODWILL  
FOR MY BUSINESS?

ANSWER:

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Give this beautiful  
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and you make a  
friend for life. Im-  
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Our newest chrome  
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there—and back—on schedule.  
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I would like to know more about the all-metal  
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# ANTITRUST

## Antitrusters Cease Fire on API

The 11-year-old suit against American Petroleum Institute has been dropped, but it doesn't mean industry is off the hook. It's still being investigated.

• The biggest antitrust suit of them all was given a decent burial last week. Attorney-General McGrath dropped a case against the entire petroleum industry pending since 1940.

"U.S. vs. American Petroleum Institute" was filed by Thurman Arnold back in 1940. It was the high-water mark of the most furious antitrust campaign ever witnessed since the passage of the Sherman Act in 1890. During the half-century of antitrust prosecutions before Arnold took over, there had been only about 400-odd suits brought by the government. During his five-year term from 1938 to 1943, Arnold's antitrusters launched about 340.

• "Mother Hubbard" Case—Arnold's suit against API became known as the "Mother Hubbard" case—"it covered everything." Originally there were 22 major oil companies and 344 smaller corporations listed as defendants, besides the institute. The suit charged that just about every practice of the petroleum industry was a violation of the antitrust law.

As President Roosevelt's David carrying out the fight against the Goliaths of industry, Arnold's theory of antitrust could be summed up as follows:

Collect the charges, then file the suit. The publicity and the public uproar would bring in the evidence that might be lacking at the outset.

• Too Big a Bite—It quickly became obvious that the API case could scarcely ever come to trial. It was a physical impossibility for the antitrusters. Their entire staff working full time on this one case could not have hurried it along.

The defendants, on the other hand, had every reason to believe that by using only a few of the legal procedures available they could keep the suit going forever.

• Antitrusters Shift—After Arnold and after World War II, the antitrusters took another tack. They began filing what they now call "segment suits"—that is, antitrust cases against either single companies or smaller groups of oil firms, charging a limited number of specific violations of the law.

The new tack has already paid off in at least one instance.

The Standard Oil of California case,

filed in 1947, was decided by the Supreme Court in the antitrusters' favor. The company's exclusive dealing contracts with its independently owned or leased service stations were against the Clayton Act (BW-Jun.18'49,p21).

A similar suit has since been filed against Sun Oil Co., charging similar contracts that bar competitors from most of Sun's 10,000 service stations.

• The Suit Shrinks—"A Little Mother Hubbard" suit was filed last year against seven major oil companies and their associations, charging them with monopolizing the oil markets of the five Pacific Coast states. These states are almost independent of the rest of the country as far as oil production and refining is concerned. So the antitrusters feel that they have an ideal "laboratory" case to test their luck with this kind of suit.

This West Coast case supplied the nudge that finally laid the API action to rest. The oil companies asked the Supreme Court for some relief from being tried on the same charges in two different cases in two different courts.

Before the Supreme Court could act, antitrust chief H. Graham Morrison and Attorney-General McGrath decided to drop the 11-year-old Mother Hubbard case for good.

• But They're Still Investigating—In a press announcement, McGrath and Morrison took occasion to list seven complaints they are investigating in the oil industry:

• Common carrier pipelines are not available to independents.

• Retail outlets are unavailable to independents.

• Refining processes are monopolized, and excessive royalties charged.

• Crude oil supplies are monopolized by a few companies.

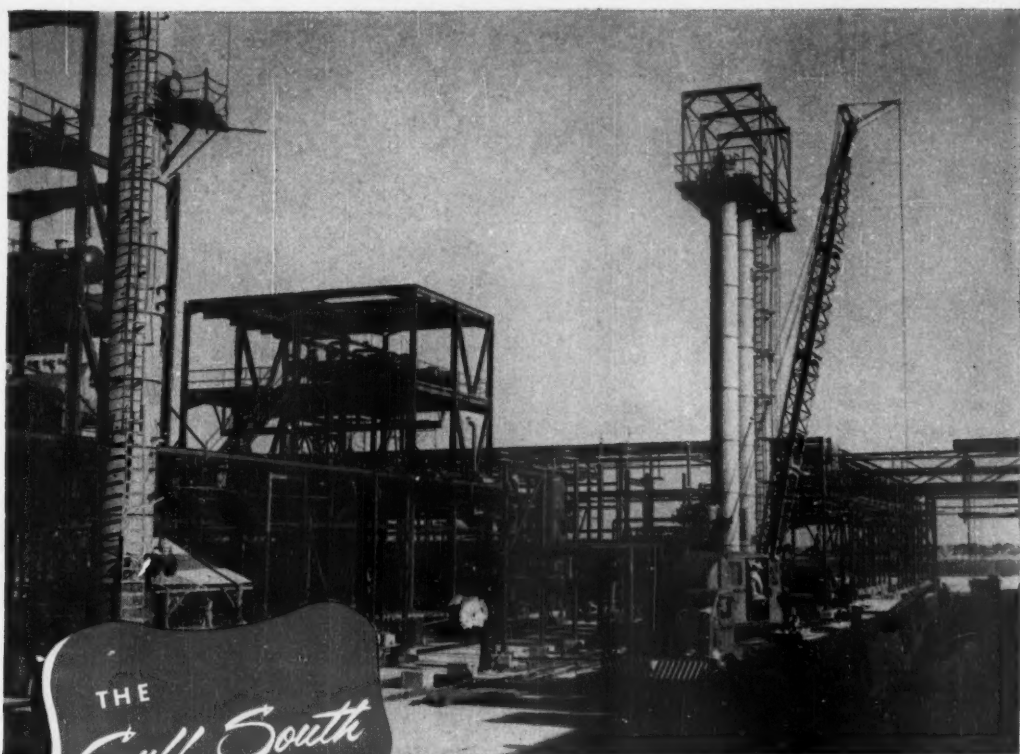
• Crude oil and finished product prices are fixed.

• Crude oil conservation programs are illegally used.

• Independent distributors can't get products at prices that enable them to compete with distributors owned or controlled by the majors.

Looking over this list of threatened suits, one industry wag dolefully remarked, "The more it changes, the more it is the same."





Major expansion project now under way at The Dow Chemical Company, Freeport, Texas—another industrial customer of United Gas

## ...leading the Nation in INDUSTRIAL Construction

Since the end of World War II, contracts have been awarded for more than 880 million dollars in new industrial building in the area served by our company. Even more startling—industrialists are now planning 1.1 billion dollars of additional new plants in the Gulf South... nearly one-fourth of the new industry proposed for the entire nation, according

to Engineering News-Record reports. Our place in this great industrial expansion is to build and maintain the facilities necessary to provide adequate, dependable supplies of natural gas. If fuel is a problem in *your* operations, communicate with our Industrial Development Director, Post Office Box 1407, Shreveport, Louisiana.

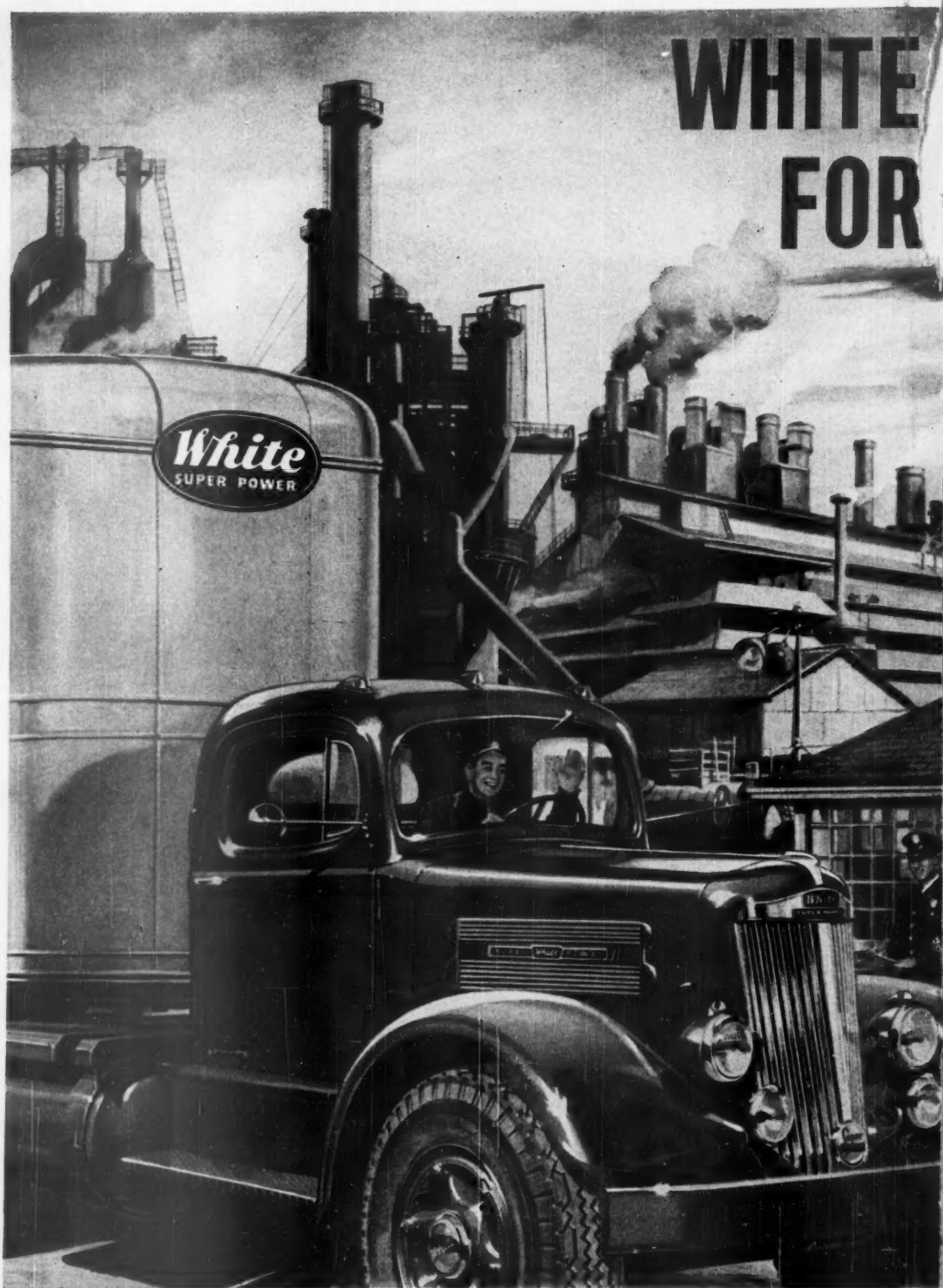
**UNITED GAS**

SERVING THE



*Gulf South*

# WHITE FOR



# TRUCKS MOBILIZE DEFENSE TRANSPORT

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That's why White—the leader in the transport

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"First Choice of the Pros"... they offer industry the most advanced engineering answer to present-day transport problems.

### White Super Power

**ORIGINAL** "First Choice of the Pros" design now features higher than ever power-to-weight ratio with new "Mustang" engine. Substantial weight savings add more payload. America's most popular "universal" transport unit among leading carriers. Wide variety of optional specifications to meet specific conditions.

### White 3000

**THOUSANDS** of owners have proved the sensational advantages of this first really new truck design. Entirely new weight distribution in many states permits 10% more payload. Drivers prefer its safety, comfort and handling ease, 8 to 1! Tremendous time-saver in traffic. Power-lift cab saves up to 50% servicing time.

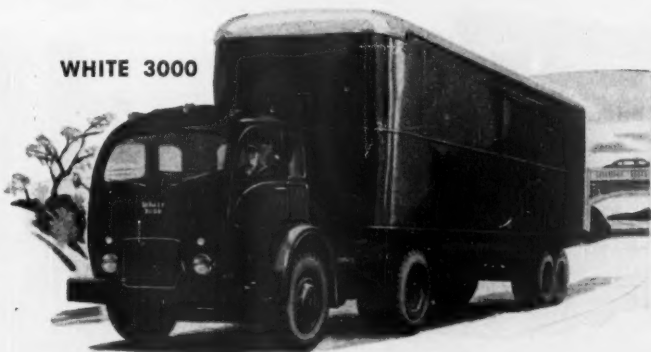
### White Diesel Power

**WHITE** now offers a complete line of Diesel Power models for heavy loads and extreme conditions. Proved low maintenance costs and maximum fuel economy. Complete model range for every operating requirement.

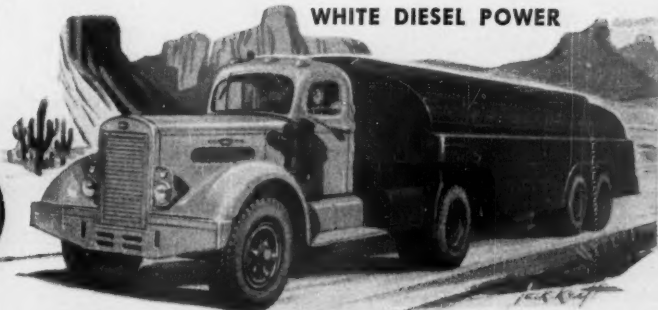
### THE WHITE MOTOR COMPANY

Cleveland 1, Ohio  
The White Motor Company of Canada Limited  
Factory at Montreal

WHITE 3000



WHITE DIESEL POWER

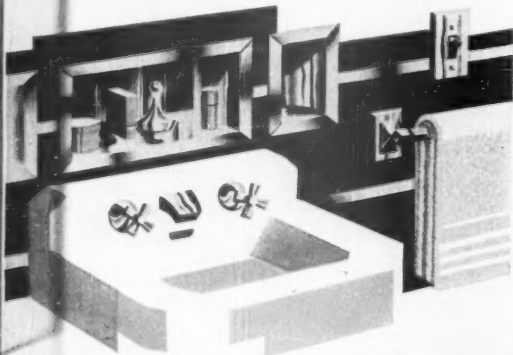
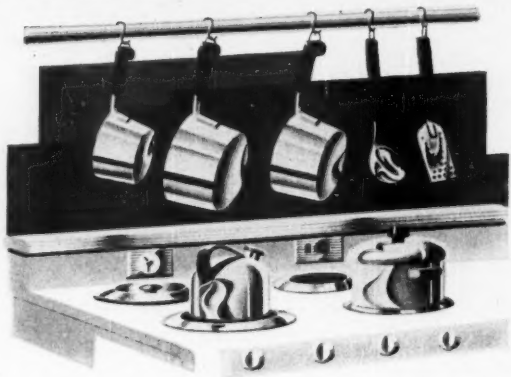
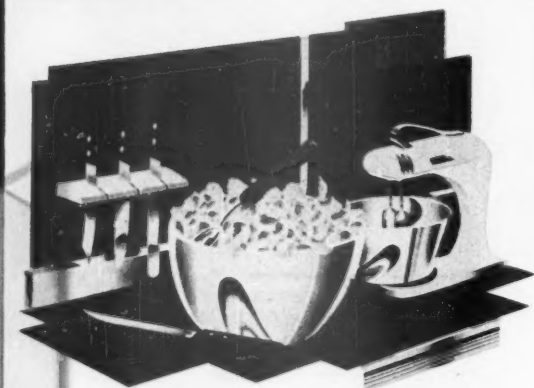


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quality counts  
in the home!



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Stainless is chosen by discriminating homemakers for beauty and permanence . . . SUPERIOR Stainless Strip Steel is specified by experienced fabricators for its many production advantages.

• Let us detail them for you!



# PROMOTION



**1911** The gasoline buggy was a novelty in the early years of Omaha's annual business pilgrimage. Since the 1890's the city's businessmen have goodwill-toured the towns that give them their trade. Parades, street dancing, general hoopla all help in the boosting.

## Grateful Omaha Thanks Its Hinterland



**1951** Mingling with the customers is still the featured touch. Here Walter Conrey of Union Pacific dances with a school teacher in Haigler, Neb.

Like any major marketing center, Omaha depends heavily on the towns and farms of a wide hinterland. That's why, way back in the 1890's, the boosterminded Nebraska city hit on a stunt to keep its trade area happy. The stunt: a swing around the circuit by leading businessmen, gaily bedight and full of merry hoopla. The signing of contracts, on the side, is one thing that's strictly taboo.

Each year since then—except for transportationless World War II—the businessmen have sallied forth for a tour of chumminess with their out-of-town constituents.

This year a 12-car special train bore over 100 business leaders on a circuit that covered more than 1,800 miles, hit 69 towns and cities in four states, drew over 150,000 people to watch the big brass of Omaha parade, and cost close to \$100,000.

The range of spots visited was wide. Hastings, Neb. (pop. 20,108), was the largest, Rochford, S. D. (pop. 47), the smallest.

The Rochford stop hadn't been



*and still fresh!*

This fresh young thing is still fresh at the end of a busy day. Reason: she sits in an individually fitted Sturgis posture chair. A capable girl and a Sturgis chair are always a good production pair.



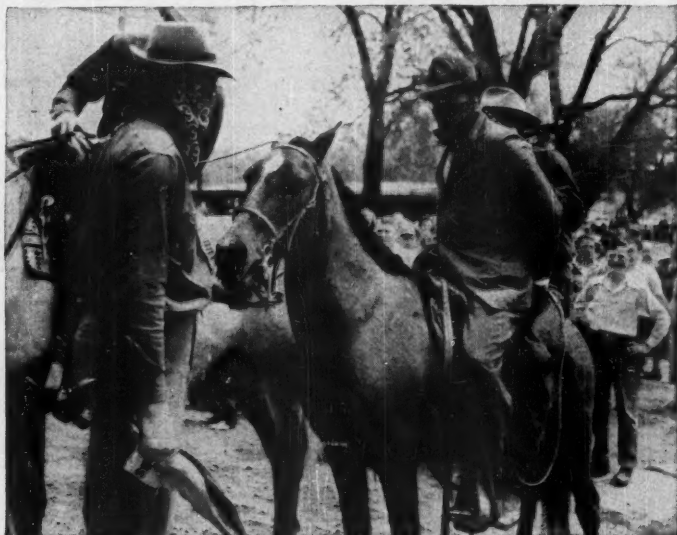
*Executive, stenographic, reception and institutional chairs posture-designed for the person and the purpose.*

**THE Sturgis POSTURE CHAIR CO.**  
**STURGIS, MICHIGAN**



## HORSEPLAY, 1909

Early Good Will tourist charms the small town feminine trade by pinning on Omaha booster buttons.



## HORSEPLAY, 1951

This year's boosters "lynch" one of their members, to keep the ball of joviality rolling in Edison, Neb.

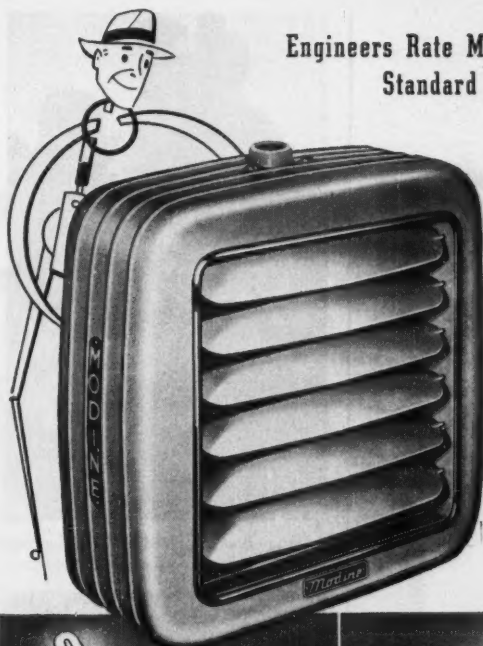
scheduled. But when the boosters heard that the citizens were feeling lonely, they ordered the train to halt and ran up a quick serenade for the Rochford people.

Music is a big feature of the Good Will Tour. The group takes along its own 32-piece band, which has been making the junket for more than 30 years now.

The routine is pretty much the same from town to town. The businessmen pile off the train, clad in

green coats, red hats, and yellow ties, carrying multicolored umbrellas. The Good Willers' band goes to work right away; then the parade starts, complete with local citizens. Later on, there's dancing in the town's streets, all sorts of merriment.

The customers of the future aren't neglected. The Good Willers carry sacks of souvenirs, deluge the small fry with paper guns, rubber dollars, lucky pennies, and jockey caps. This year a banker-parader recalled how, 30 years

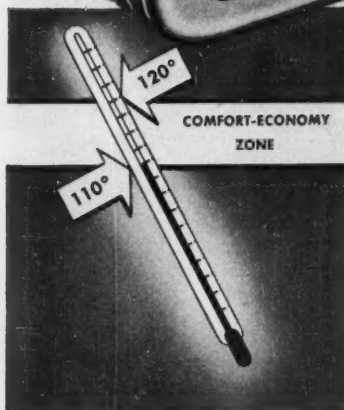


Engineers Rate Modine the  
Standard of Excellence

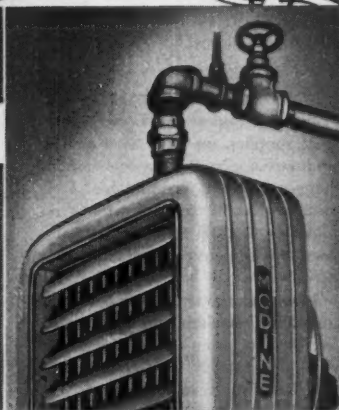
# COMPARE FIRST...

...YOU'LL CHOOSE

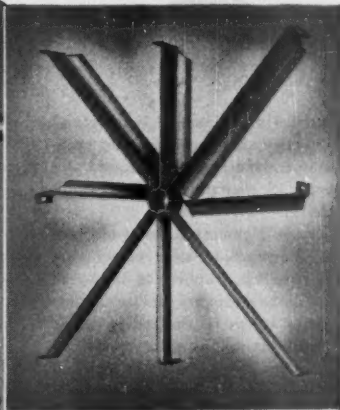
**MODINE UNIT HEATERS**



Discharge air temperatures of 110°-120° F... correctly related to air velocities assure perfect heating comfort, lower fuel costs.




Direct-from-pipe suspension is safe and economical. Heated air stream may be easily re-directed over full 360° range.



Built-in velocity generator effectively steps up heat-throw, permitting positive penetration of cold air strata near floor.

**Three of many outstanding features which account for the Modine quality reputation**

 Whether you choose Modine *Horizontal*, *Vertical* or *Power-Throw* Unit Heaters you are assured of unequalled heating performance — high fuel economy — low operating and maintenance costs . . . for years and years. Beautifully styled — yes! But it's the advanced engineering design features, highest grade materials and workmanship that account for this famous Modine built-in quality. No wonder engineers rate Modine the standard of excellence among unit heaters. *Yes, compare first . . . and you too will choose Modines.* Modine Manufacturing Co., 1508 De-koven Ave., Racine, Wisconsin.



 Ask for Modine Unit Heater Bulletin 149A. Also available — bulletins covering special applications in commercial brooder houses, greenhouses, milk houses and many other applications.

**Modine UNIT HEATERS**

# Color problems



## IN POLYSTYRENE

and what to do  
about them

**L**IMITED supplies of important elements have created color problems in translucent and opaque Polystyrenes for manufacturers and molders alike.

Certain pigments have made possible Polystyrenes with colors that have excellent stability to heat and light. These pigments produce a wide range of colors in the red-to-yellow spectrum, as well as some greens and even a few blues. Now, by government orders, supplies of these pigments are limited, except for the most vital defense uses.

Other pigments used as opacifiers in all translucent and opaque Polystyrenes except black, are in exceedingly short supply.

Through customer cooperation and

by inventory management of raw material supplies, we have been able to produce Koppers Polystyrene without changes in color formulations. It is possible that in time we will be required to develop new formulations, using replacement colorants, for some colors.

When you use these new color formulations consider the application carefully in terms of necessary heat and light stability. For your protection, when replacement color formulations become necessary, recommendations concerning their use will be supplied.

As always, Koppers will work closely with customers to help them obtain best results. Before planning production, check with us.

KOPPERS POLYSTYRENE HAS MADE  
MANY PRODUCTS BETTER  
AND MANY BETTER PRODUCTS POSSIBLE



## Koppers Plastics

**KOPPERS COMPANY, INC.**

Chemical Division Pittsburgh 19, Pa.

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**1907** Boosters posed with daring local belles on locomotive of their train.



**1951** Parade welcomes Mrs. K. Soldat, South Dakota's only woman mayor.

ago, he had won a miniature cowbell.

On occasion, nostalgia becomes rife. Another parading banker was greeted by a rancher in a big dusty car. The rancher, misty-eyed, told how the Omaha bank had saved his land back in the Dust Bowl days. In token of gratitude, he trailed the Good Willers through the next four towns.

The colored umbrellas came in handy this year. It rained on five of the six days of the tour; the train became known as the Rain-Making Special, with boosters and deluge arriving hand in hand.



## So you've got a military contract?



**Sure...** it's tough to get into production. But let me tell you about how another manufacturer handled that problem.

His name's Harry B. — Harry makes automotive parts. Last December, he landed a big Defense Order, too. I got a rush call.

"Look," he told me the minute I got my foot in the door, "We're supposed to start deliveries in 90 days. Making the product is a cinch, but there are two headaches I haven't solved that I think maybe you can fix. First, I've got to establish my requirements for raw materials, parts, and assemblies. And second, I've got to get them in, in sufficient quantities, at the right time, to meet my production schedules."

"I need a system. One that will work, and *work fast*. Got any ideas, any systems? Ever organized a job like this for anyone else?"

Well, I didn't have time to start from scratch on Harry's problem, so I dropped back to the office and began digging around in our data files. Took me a couple of hours. I got back to see Harry the same day. Here's what I suggested, and Harry bought, on the spot: \*

**1. A SIMPLIFIED PRODUCTION AND COST ACCOUNTING SYSTEM** that turns out punched-card reports *daily* on material requirements, production progress, and material and labor costs. This gives Harry the *Fact-Power* he needs to keep on top of his costs and delivery schedules. And he uses the *same* punched cards to produce all his payroll records!<sup>1</sup>

**2. A KARDEX INVENTORY CONTROL SYSTEM**, the same one we installed for many war contractors from 1940 to 1945. This system flags a warning whenever stock of any item is running too low in relation to production requirements. As a dividend, it's got Harry ready for *any* kind of Controlled Materials Plan that may come.<sup>2</sup>

**3. AN EFFECTIVE PROCUREMENT SYSTEM** — basically the same thing we have put in recently for scores of manufacturers. It's a simplified purchase-order control that gives a quick daily check on all items due for vendor follow-up.<sup>3</sup>

**How Much Did It Cost?** It will take about five months to pay for Harry's new system out of actual, provable savings on clerical work alone. But, as Harry points out, his big gain is in getting maximum production from his present facilities—with deliveries made on time.

**Is Your House In Order?** We haven't any miracles or cure-alls to offer. What we do have is broader experience than any other supplier in the field on production control and related operations. We're not limited to — or biased toward — any one system, machine or type of equipment. We make them *all*.

As a first step, take a moment now to write for one or more of the free folders listed in the coupon below — they're packed with actual case-history facts and figures, and practical answers to problems closely similar to yours. Or, if you'd like to see a copy *today*, phone the nearest Remington Rand office.

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Room 1142, 315 Fourth Ave., New York 10

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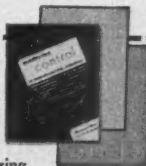
- 1. ☐ TM596 — Production Control in Manufacturing
- 2. ☐ KD375 — Kardex Inventory Control
- 3. ☐ SN626 — Simplified Purchase Control

Name \_\_\_\_\_ Firm \_\_\_\_\_

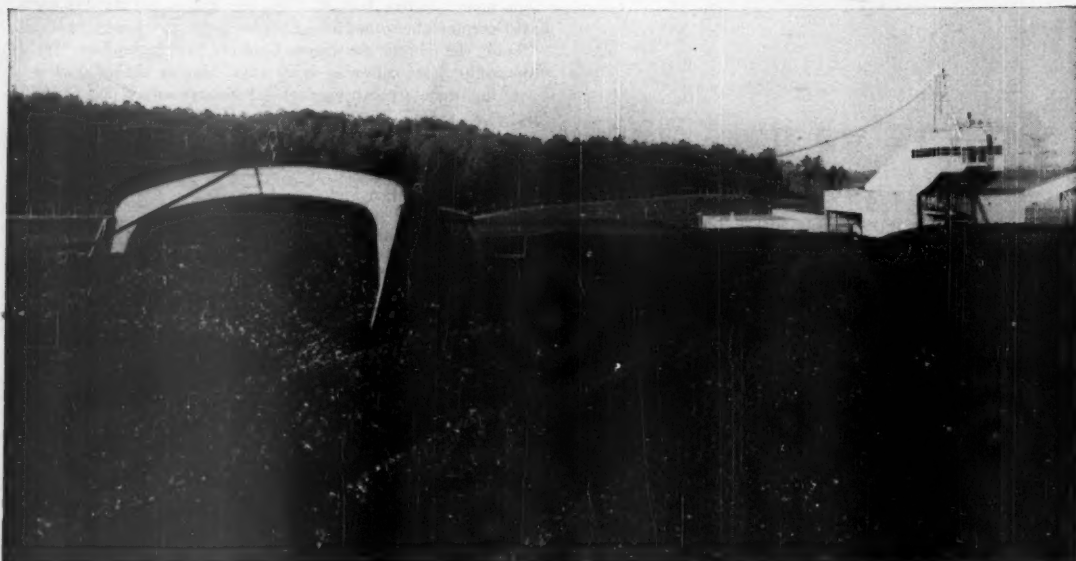
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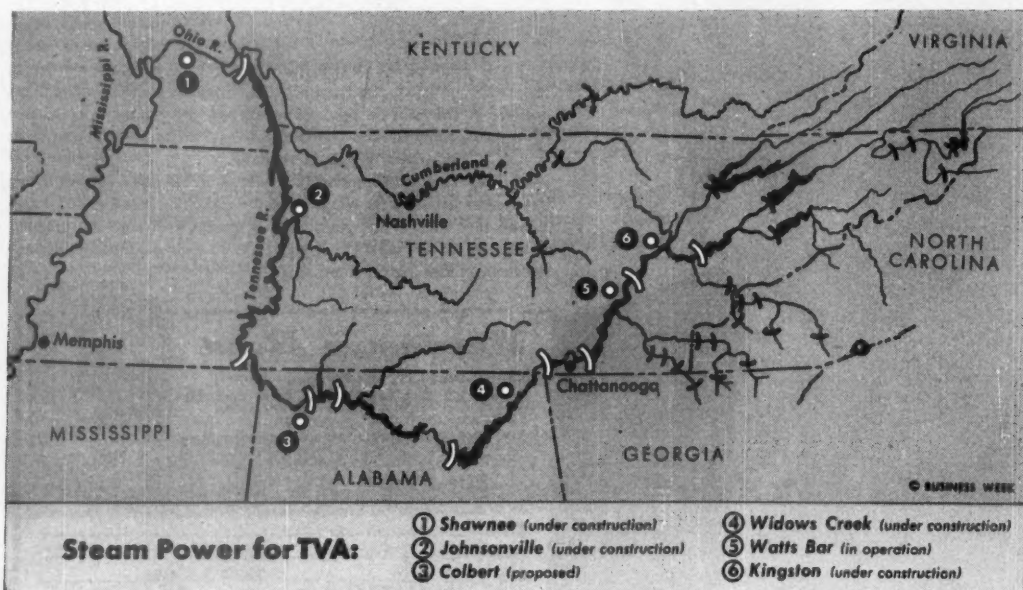


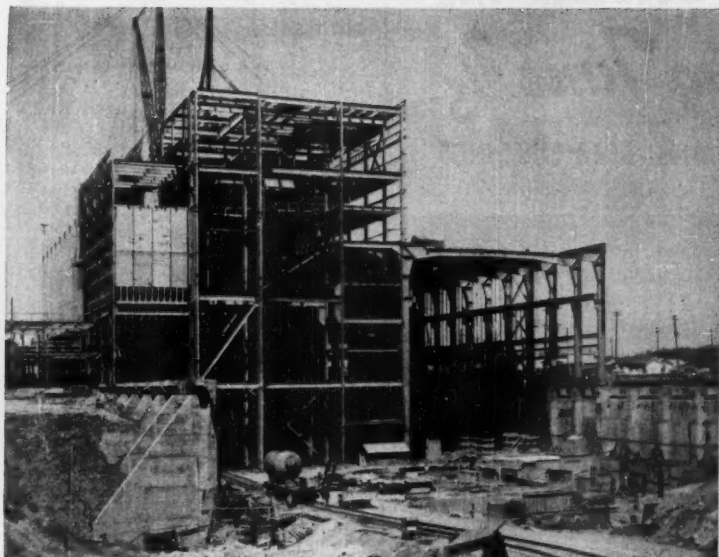
# REGIONS



MOUNTAINS OF COAL will be consumed by TVA's mushrooming steam generation plant. This scene is at the Watts Bar plant.

## TVA Moves Into Steam To Fill Power Needs for Atom





CONSTRUCTION is moving fast at the six-unit New Johnsonville (Tenn.) steam plant.

The atomic bomb has blown the Tennessee Valley Authority right into steam generation of electricity on a massive scale. And it has brought to life the possibility that Bonneville or any future river development may some day move right on into steam when it reaches the limit of hydroelectric potential.

It was only two years ago that a reluctant Congress gave TVA permission to build an important steam generating plant. In congressional ears, the clamoring power needs of the Atomic Energy Commission just barely drowned out the angry protests of the private power industry.

• **Over Half**—Since then, TVA steam generation has been bursting at the seams. Within a few years, when the present expansion program is complete, more than half of TVA's 6-million kw. capacity will be steam generated. The 3.1-million kw. of new capacity, now being built or requested, will more than top TVA's 1950 capacity from all sources.

The power needs of the atomic program are staggering. Take the plant going up at Paducah, Ky. Just to supply this new demand 1,280,000 kw. must be improvised. So TVA is building a new steam plant to supply half of it; the rest will come from Electric Energy, Inc., a new company organized by private regional utilities.

Other new plants, atomic and otherwise, are popping like corn on the

hearth; they provide more than enough cause for TVA's shift to steam. But there are other reasons, too, on a smaller scale.

• **Farms**—Hydroelectric systems—and that's how TVA began and flourished—generate more than electricity. Their power creates a demand for more power. In 1933, when TVA was born, only three out of 100 farms in the system's seven-state area were electrified. Today it's 86 out of 100; within a year 96 out of 100 is expected.

At the same time, new industries move into the area where power has become available. That brings in more people, creates still further demand by machines and by people.

In time, the power demand runs into a ceiling. Hydroelectric systems have a calculable limit; when all the available water has been pent up and put to work, the expansion has to stop. TVA, when present projects are completed, will be pretty close to its efficient hydroelectric limit.

• **Rain Factor**—Water-made electricity has another catch. As the weather goes, so go the rivers—and the turbines. Certain capacity has to be figured on what can be produced in a dry year. Sure, there's a bonus of infirm power in wet years of swollen streams. But factories and farms can't run on uncertain bonus, with a threat of long shutdown if it forgets to rain.

That's where steam power came into the hydroelectric picture—long before

**Whether your products' components** are held to tolerances of .2", .002", or .000002", these simple instruments will remove the human element from many processes in your plant. DYNA-MYKE gives you automatic precision inspection on the machine; DYNA-METER teams up with it to give you acceptance or rejection—and instant action without human aid! These portable instruments not only eliminate scrap at the source, they shut down machines, make a record, make adjustments, retract tools, signal—any one or all of these—automatically, accurately, in one one-thousandth of a second!

The DYNA-MYKE and DYNA-METER can point the way to tremendous savings in man-power and scrap reduction at the source through electronic measurement and control of many basic engineering phenomena. Your manufacturing problems usually involve one or more of these—force, torque, strain, vibration, acceleration, temperature, pressure, rate of flow, thickness, surface finish, etc. To many of these problems, the instant, infallible quality control provided by these instruments is the solution. Write for complete information and suggested applications. For technical specifications, ask for Bulletins T-129 and T-134.

Custom Builders of Electronic Instruments Since 1943



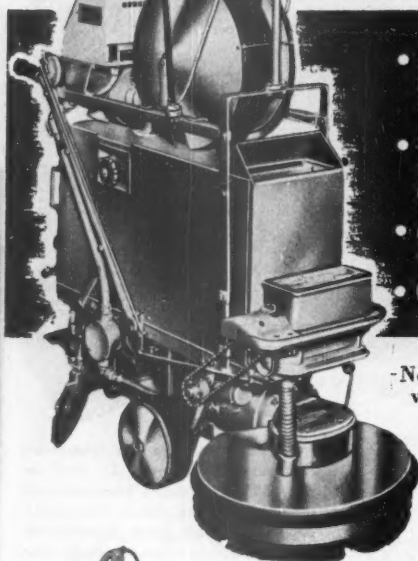
**INDUSTRIAL  
ELECTRONICS,  
INCORPORATED**

8070 Wheeler St., Detroit 10, Mich.

# NEW SCRUBBER-VAC

## Cuts Cleaning Time $\frac{2}{3}$

### FOR SMALL-AREA BUILDINGS



- Specially designed for buildings with 2,000 to 15,000 sq. ft. of floor space
- Applies the cleanser, scrubs, rinses, and picks up — in ONE operation!
- Also handles the dry work — polishing, et cetera
- Can be leased or purchased

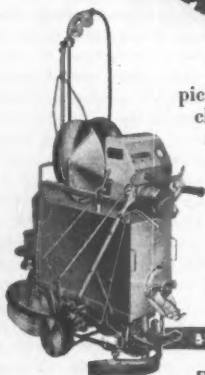
Now the labor-saving advantages of combination-machine-scrubbing are available to small as well as larger buildings.

The new 418P Finnell Scrubber-Vac cleans floors in approximately one-third the time

required with a conventional 15 or 18-inch polisher-

scrubber using separate equipment for picking up. A Finnell Scrubber-Vac speeds cleaning by handling four operations in one! It applies the cleanser, scrubs, rinses if required, and picks up (damp-dries the floor) — all in a single operation.

All the refinements of Finnell's larger combination machines are embodied in the new smaller unit, No. 418P, which has an 18-inch brush ring. Vacuum performs quietly. The machine is self-propelled — operator merely guides it.



SEE IT IN ACTION ON YOUR OWN FLOOR!

Find out what you would save with a Finnell Scrubber-Vac. Finnell makes several models and sizes. Incidentally, it's good to know that when you choose Finnell Equipment, a Finnell man is readily available to help train your maintenance operators in its proper use. For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 3806 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

## FINNELL SYSTEM, INC.

Pioneers and Specialists in  
FLOOR MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES  
IN ALL  
PRINCIPAL  
CITIES

"... the Valley is rushing this program of steam plants..."

TVA STEAM starts on p. 98

the atom created the extra demand. You contract to supply power up to the good-year capacity of your hydroelectric plant. Then you build a standby steam plant that can make up the difference between firm and infirm production by water.

• **Cheaper, Quicker**—In times of swiftly rising emergency demand, steam is more than a standby. Steam plants can be built quicker and cheaper than hydro. And in an emergency, the lower operating costs of hydro aren't what count. The important thing is availability.

For example, there's a splattering of aluminum plants in TVA territory; more would like to move in. Aluminum takes scads of electricity. And with aluminum critically short, you can't afford to have the existing plants on an interruptible basis.

Basically, it's the atomic needs that have pushed TVA well past the point where steam is just a standby. That's why the Valley is rushing this program of steam plants:

| Plant                  | Units | Kw. Capacity |
|------------------------|-------|--------------|
| New Johnsonville ..... | 6     | 750,000      |
| Widow's Creek .....    | 4     | 500,000      |
| Widow's Creek* .....   | 2     | 250,000      |
| Kingston .....         | 4     | 640,000      |
| Shawnee .....          | 4     | 640,000      |
| Colbert* .....         | 2     | 320,000      |
| Total .....            | 22    | 3,100,000    |

\* Legislation pending.

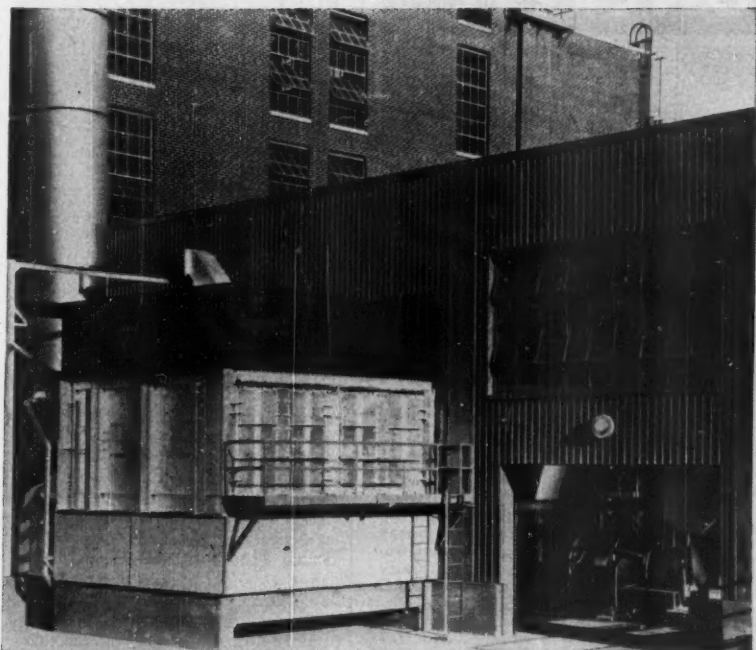
The kw. capacities given in the table are at overload rating. These figures are more realistic under present condition of demand than the older, somewhat lower, standard ratings that are often given. By the standard rating, TVA's whole steam program, started and requested, would have a capacity of 2.7-million kw.

• **First Steps**—No matter what rating you use, the program is a long way from the day in 1939 when TVA took its first timid steps into steam by buying up the Tennessee Electric Power Co. The few small steam plants that came in that deal were neither very good nor much needed.

During World War II, TVA got permission to build the big Watts Bar steam plant—its first venture into steam construction. The private power industry wasn't too unhappy, feeling that this was for purely defense purposes.

• **Precedent**—The real scream came in 1948 when TVA asked authorization to build the New Johnsonville plant. The industry fought this ferociously and





## GAS TURBINES

This General Electric Gas Turbine contributes to the total station economy by supplying valuable exhaust heat, as well as electric power. The 3500 KW unit (inside doorway) exhausts through the feedwater heater outside the building.

# NEW WAY TO MAKE BOTH POWER AND HEAT

Since its introduction more than two years ago, the combustion gas turbine has demonstrated its ability in a number of installations. Continuing studies by General Electric, pioneer in gas turbine development, now point to new economies for power plants with additional need for both electric power and steam.

In an installation such as that diagrammed at right, the gas turbine drives a generator and exhausts through steam boilers. This arrangement provides power up to 5000 kilowatts as well as steam up to 40,000 lb per hour.

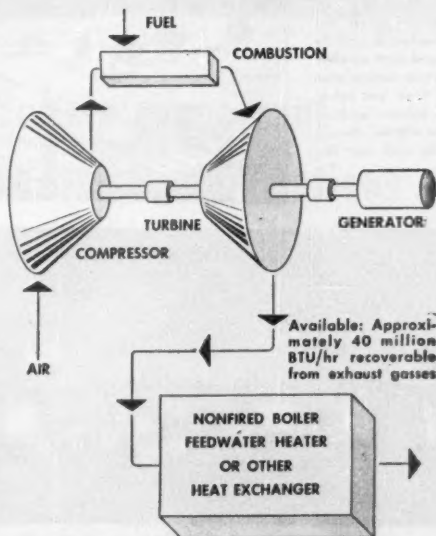
### OVER-ALL PLANT ECONOMY

The efficiency of the gas turbine—steam recovery cycle may be as high as 70%, considering the value of the heat and electrical energy which it provides.

### INSTALLATION SIMPLICITY

Gas turbines require very little cooling water. The unit itself is small and compact; investment for buildings and foundations is low. Should plant conditions change, a gas turbine can be easily moved to a new installation.

Naturally, the economy of the gas turbine-steam cycle must be calculated in terms of individual applications. If you would like to investigate this idea, a G-E turbine specialist will be glad to undertake a study for you. Or, if you'd like a copy of our 28-page descriptive bulletin on Gas Turbines (GEA-5516), contact your nearest Apparatus Sales Office or write General Electric, Schenectady 5, N. Y.

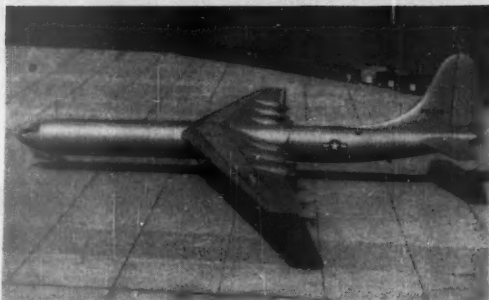


GENERAL  ELECTRIC

# Select CONCRETE

## FOR DEFENSE

airports and roads and streets needed to keep America strong. Concrete pavement usually costs less to build than others of equal load-carrying capacity. It costs less to maintain and lasts longer. The result: low annual cost.

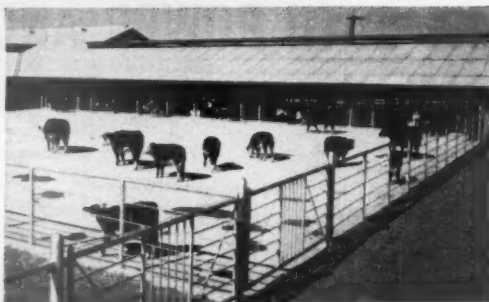


## FOR FACTORIES

in defense production and for other essential construction such as hospitals and schools hangars and warehouses. Concrete offers rugged strength, maximum fire-safety, lasting beauty and the economy of low-annual-cost service.

## FOR FARM USES

such as dairy barns and floors, feed lots, hog and poultry houses that are needed to provide increased food supplies. Concrete construction saves feed and labor, keeps animals healthier, resists storms, decay, termites, rats and fire.



## FOR HOMES

of distinction in any size or style. A concrete house is moderate in first cost, lasts much longer, requires fewer repairs and less maintenance. Consequently it actually costs less per year to live in a firesafe concrete house.

## PORTLAND CEMENT ASSOCIATION

33 W. Grand Avenue, Chicago 10, Illinois

A national organization to improve and extend the uses of portland cement and concrete... through scientific research and engineering field work

*"... nonatomic demands had been increasing faster than new capacity ..."*

TVA STEAM starts on p. 98

won a "no" from Congress that year. But in 1949 Congress reversed itself and granted the authorization.

The New Johnsonville plant sets first solid precedent for the federal government's 100% entry into the commercial electric power business. (The original TVA was a mixture of hydroelectric power, flood control, land reclamation, and what have you.)

The first New Johnsonville project at which the private power business leveled its fire called for three units with a modest capacity of 375,000 kw. The particular bird that the industry was shooting at looked like an eagle then; but it's down to sparrow size now.

• **More Atoms**—Ground had hardly been broken at New Johnsonville when AEC announced it was doubling its power-eating atomic capacity at Oak Ridge, Tenn. First one, then two more units were added. A seventh and eighth were planned to help carry the Paducah load, but were dropped when Electric Energy came into the picture, along with Shawnee.

The parade of new steam plants was on. Emergency funds were obtained to start the six-unit Widow's Creek setup, on Guntersville reservoir in northeast Alabama.

All this time, TVA's nonatomic demands had been increasing faster than new capacity could be brought in. It was primarily to meet these needs that supplemental funds were rushed through late last year for the steam plant at Kingston, Tenn. Now TVA is asking Congress to ante up for a smaller plant at the Colbert site in northwest Alabama.

• **Coal Market**—Amid all this excitement, the happy chortling of coal mine operators has provided a minor undertone. At maximum load, when all plants are completed, TVA's annual coal consumption may reach 9.7-million tons. E. E. Robinson, TVA's power production chief, told Congress 1954's schedule called for over 8-million tons.

That's a lot of coal compared with the 800,000 to 900,000 annual average of the past 10 years—or even the 1.5-million peak of 1948.

Charles R. Griffith, president of the Southern Appalachian Coal Operators' Assn., says there will be no trouble in meeting the demand. His group operates about 40 mines in Kentucky and Tennessee, which produce about 3.5-million tons annually. Exploration is being pushed for new coal seams; some are said to be already lined up.



\*FAIRFAX individual hand towels used by Aetna Life Insurance Company are serviced by Hartford Apron & Towel Supply Company

## Aetna Life considers Cotton Towels\* important to good employee relations



**Here's How  
Linen Supply Works...**

You buy nothing . . . your linen supply dealer supplies everything. The low cost includes cabinets, pick-up and delivery, provides automatic supply of freshly laundered towels. Quantities can be increased or decreased on short notice. Local service is listed in your classified book under **SERVILINEN or LINEN SUPPLY.**

● The giant Aetna Life Insurance Company is housed in the world's largest building of American Colonial architecture. More than 3,300 employees comprise the home office staff of this Hartford, Connecticut, company. Its management, like thousands of other progressive companies, has found that cotton towels best meet its needs for efficient towel service.

Whatever your towel problem . . . whether you operate a factory, institution, office or store . . . you can be sure that soft, gentle absorbent cotton towels will do the best job in promoting employee morale, building customer good will, increasing tidiness in your washrooms and cleanliness among your employees. Cotton towel service is economical, it's efficient and it's a sign of good management.

### **Clean Cotton Towels...**

*Sure Sign of Good Management*

***Fairfax Towels***

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# PRIME CONTRACTORS

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**THEIR PLANTS HAVE PRESS CAPACITY TO FORM,  
DRAW OR STAMP YOUR ALUMINUM REARMAMENT JOBS**

Many of our customers have already invested in the equipment needed to handle your aluminum forming subcontracts. They are seeking defense business. They offer knowledge gained from years of making aluminum products of their own. We recommend them because we helped many of them take their first light metal steps—and served all of them as they learned their aluminum skills.

If you are a prime contractor in aluminum, many of your defense orders may require presswork. Forming, stamping, coining, embossing, drawing, shearing and stretch forming are familiar operations to these companies.

An inquiry to your nearest Alcoa Sales Office will bring prompt action. Write or phone regarding your requirements, so we can tell you about the companies whose locations can best serve your needs. ALUMINUM COMPANY OF AMERICA, 2170F Gulf Building, Pittsburgh 19, Pennsylvania.

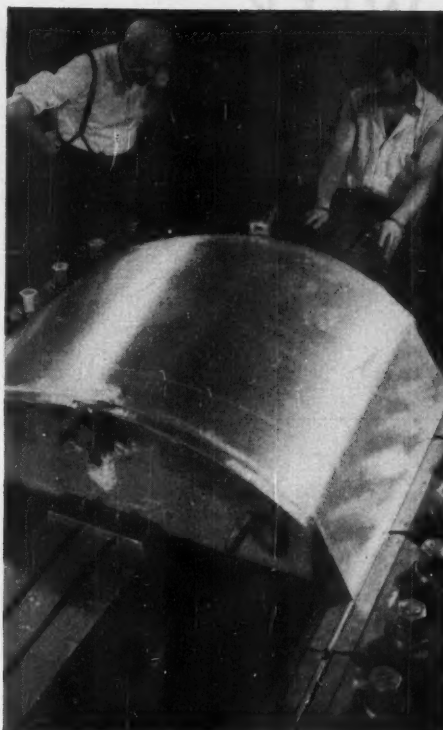


## ALCOA

**FIRST IN ALUMINUM**

*A business built on Co-operation*





Stretch forming, shown here, is an inexpensive method of forming parts not requiring sharp radii. This process eliminates costly dies and presses—is extensively used in the aircraft industry.



## THESE ALCOA SALES OFFICES WILL HELP YOU

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|-------------------------|---------------------------------------|
| AKRON 8, OHIO           | 506 Akron Savings & Loan Building     |
| ALBANY 7, N. Y.         | 90 State Street                       |
| ALLENTOWN, PA.          | 913 Hamilton Street                   |
| ATLANTA 3, GA.          | 1800 Rhodes-Haverty Building          |
| BALTIMORE 1, MD.        | 400 Baltimore Life Building           |
| BIRMINGHAM 3, ALA.      | 505 First National Building           |
| BOSTON 16, MASS.        | 20 Providence Street, Park Square     |
| BUFFALO 7, N. Y.        | 1880 Elmwood Avenue                   |
| CHARLOTTE 2, N. C.      | 616 Johnston Building                 |
| CHICAGO 11, ILL.        | 520 North Michigan Avenue             |
| CINCINNATI 2, OHIO      | 801 Enquirer Building                 |
| CLEVELAND 13, OHIO      | 1450 Terminal Tower                   |
| COLUMBUS 15, OHIO       | 40 South Third Street Building        |
| DALLAS 1, TEXAS         | 301 Thomas Building                   |
| DAVENPORT, IOWA         | 503 Kahl Building                     |
| DAYTON 2, OHIO          | 302 Harries Building                  |
| DENVER 2, COLO.         | 524 U. S. National Bank Building      |
| DETROIT 2, MICH.        | 610 New Center Building               |
| FAIRFIELD, CONN.        | 1333 Post Road                        |
| FORT WAYNE, IND.        | 1935 Lincoln Tower                    |
| GRAND RAPIDS 2, MICH.   | 812 Michigan National Bank Building   |
| HARTFORD 3, CONN.       | Capitol Building, 410 Asylum Street   |
| HOUSTON 2, TEXAS        | 1806 Commerce Building                |
| INDIANAPOLIS 4, IND.    | 817 Merchants Bank Building           |
| JACKSON, MICH.          | 1203 National Bank Building           |
| KANSAS CITY 6, MO.      | 2300 Power & Light Building           |
| LOS ANGELES 14, CALIF.  | 108 West Sixth Street                 |
| LOUISVILLE 2, KY.       | 1154 Starks Building                  |
| MIAMI 32, FLA.          | 1605 Alfred I. du Pont Building       |
| MILWAUKEE 2, WIS.       | 735 North Water Street                |
| MINNEAPOLIS 2, MINN.    | 1060 Northwestern Bank Building       |
| NEWARK 2, N. J.         | 744 Broad Street                      |
| NEW ORLEANS 12, LA.     | 627 Whitney Bank Building             |
| NEW YORK 17, N. Y.      | 230 Park Avenue                       |
| OKLAHOMA CITY 2, OKLA.  | 1606 Apco Tower                       |
| PEORIA 1, ILL.          | 415 Commercial National Bank Building |
| PHILADELPHIA 9, PA.     | 123 S. Broad Street                   |
| PITTSBURGH 22, PA.      | 2012 Oliver Building                  |
| PONTIAC 15, MICH.       | 301 Pontiac State Bank Building       |
| PROVIDENCE 3, R. I.     | 815 Industrial Trust Building         |
| RICHMOND 19, VA.        | 712 Southern States Building          |
| ROCHESTER 4, N. Y.      | 1331 Lincoln Alliance Bank Building   |
| ST. LOUIS 8, MO.        | 10th Floor, Continental Building      |
| SAN FRANCISCO 4, CALIF. | 615 Russ Building                     |
| SEATTLE 1, WASH.        | 1411 Fourth Avenue Building           |
| SOUTH BEND 5, IND.      | 805 J.M.S. Building                   |
| SPRINGFIELD 3, MASS.    | 507 Tarbell-Watters Building          |
| SYRACUSE 2, N. Y.       | 408 State Tower Building              |
| TAMPA 2, FLA.           | 1004 Tampa Theater Building           |
| TOLEDO 4, OHIO          | 1801 Ohio Building                    |
| VANCOUVER, WASH.        | P. O. Box 120                         |
| WASHINGTON 6, D. C.     | 1200 Ring Building                    |
| WICHITA 2, KAN.         | 1011 Central Building                 |
| WILMINGTON, DEL.        | Delaware Trust Building               |
| YORK, PA.               | 205 Manufacturers Building            |

Aluminum is adaptable to all kinds of presswork (blanking, piercing, drawing, embossing, coining and stamping). Aluminum discs are being blanked here for subsequent forming operations.

# FIGURES OF THE WEEK



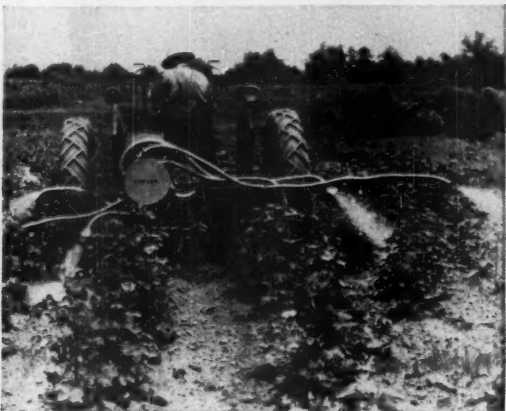
**1** Tractor-drawn three-row middle-buster prepares cotton field for planting. Mules still do half this work in southeast.



**2** Arizona farm is seeded with this four-row seeder. Seeding is another operation mules still have a lot to do with.



**3** Cultivator does work of many farm hands. Because of cost, machines turn up mostly on big western and Delta farms.



**4** Boll weevil is still cotton's No. 1 enemy. This machine cultivates and sprays weevil killer at the same time.

FIFTEENTH OF A SERIES

## King Cotton: Deified and Mechanized

After fig leaves, cotton probably was the first vegetable widely used for clothing. Hides and wool came in between.

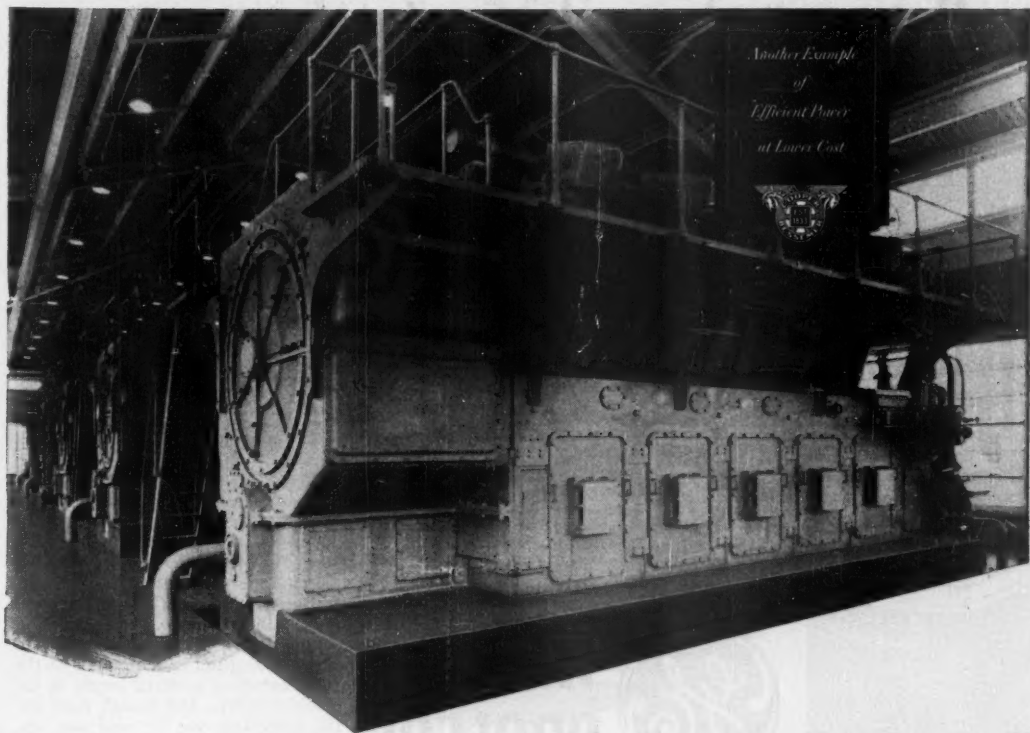
In some respects, cotton has even more personal significance for the businessman than wheat (BW—Jun. 9 '51, p79). A full stomach—especially one filled with bread—isn't a very pressing problem for the average American executive today. But cotton is one of the things that provide him and his family with clothing, comfort, and recreation—which may be of more concern to some than eating. Cotton gives the businessman his Brooks Bros. shirt, the sails for

his boat, and maybe the cord for the tires of his car, though rayon has replaced it to some extent in tire cord.

• **History**—Chemically, cotton is almost pure cellulose, and historically it is very old, even prehistoric. The earliest mention of it seems to have been in the literature of India around 1500 B. C. Nobody knows where it was first grown intentionally, but it seems to have been in India or somewhere nearby. Traders offered pieces of Indian cotton cloth in the market places of Babylon in the days of Nebuchadnezzar, when it was considered a great luxury.

Legends about its origin usually turn around the idea that sometime during the development of the plant a small lamb attached itself to the stalk—a not unreasonable explanation for cotton's white, fluffy appearance, when you consider that those were the times when magic was the law, and the entrails of a chicken carried as much weight in determining the future as charts and statistics do today.

The word cotton has been in use in the West a long time. It apparently came into the language from the Arabic word qutun. But cotton wasn't an East-



## KEEPING INDUSTRY AT WORK... *1000 miles away*

**W**ITH every passing year, America has become more and more dependent on the energy of natural gas—not only for household use, but for an incredible range of industrial processing and manufacturing operations.

The reasons are simple . . . logical. America has gas in abundance. Through pipe lines it is speeded thousands of miles across country, delivered and put to work at lower cost than any other known heat source. It's clean, efficient, versatile. In fact gas is doing a *tremendous* job . . . today!

The photo above shows a typical pipe line compressor station powered by Cooper-Bessemer gas engines. It's such stations, hundreds all along the lines, that push the gas across America to help keep our vital industries at work.

The men responsible for national defense production know how vital it is to keep the gas coming in adequate supply. They're seeing to it that the mate-

rials necessary for increased power and line capacities are made available as demands on industry grow heavier.

And here at Cooper-Bessemer we're building those big, modern compressor engines at a greater rate than ever before, because so many men of the gas industry have found that it pays to take advantage of the *new* things being done by one of America's *oldest* engine builders.

*The*  
**Cooper-Bessemer**  
*Corporation*

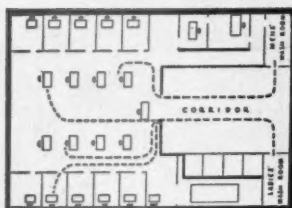
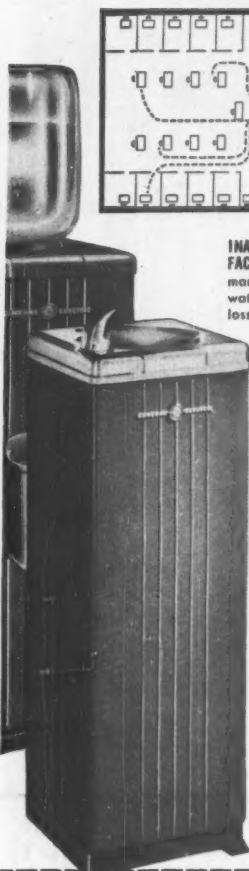
MOUNT VERNON, OHIO

GROVE CITY, PA.

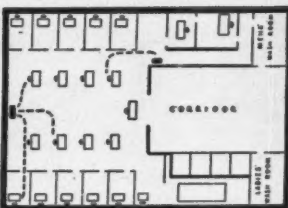
New York • Chicago • Washington • San Francisco • Los Angeles  
• Houston • Dallas • Odessa • Seattle • Tulsa • St. Louis • Gloucester  
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DIESELS • GAS ENGINES • GAS DIESELS • ENGINE-DRIVEN AND MOTOR-DRIVEN COMPRESSORS • HIGH PRESSURE LIQUID PUMPS

# Cut wasted man-hours with the compact new G-E Water Coolers!



**INADEQUATE DRINKING FACILITIES** cause wasted man-hours. Long trips to water source bring the loss of work time.



**CONVENIENT LOCATION** of G-E Water Coolers means time saved. Employees stay near their desks, are available when needed. G-E Water Coolers are compact, fit in where convenient.



## WATER COOLERS

Your payroll dollar brings a greater return when cool, refreshing water is easily available, near employee working areas. The handsome new G-E Water Coolers, near at hand, save time, build efficiency and morale. Ask your local G-E Dealer for advice on the water cooler requirements of your business establishment.

General Electric Company, Section BW-7  
Air Conditioning Department  
Bloomfield, New Jersey

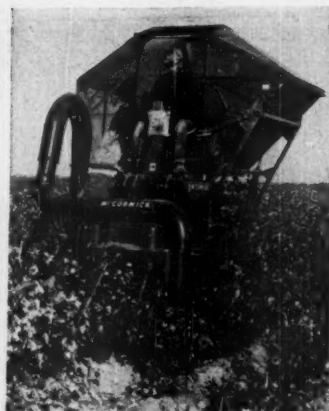
Please send without obligation to me the fully illustrated book, "Water at Work."

**FREE!**  
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You can put your confidence in—

**GENERAL  ELECTRIC**



**COTTON PICKER** is effective, but 92% of the U. S. crop is still hand-harvested.

ern Hemisphere monopoly. It was already being produced in South America when the Spanish took over—and still is.

• **Growth in U.S.**—Cotton became a major American crop because England was a textile producer. The colonists that moved in along the eastern seaboard planted tobacco, rice, indigo—and cotton. When the industrial revolution began in England in the middle of the 18th century, it centered largely in the textile industry. And though most textile production was in wool and silk, the demand for cotton increased.

In 1790 U. S. cotton production hit 3,000 bales—practically nothing by today's standards. In those days, once the cotton was harvested, the seeds had to be removed by hand. It often took a whole day for a man to clean a pound of cotton, so it wasn't the relatively low-cost textile it is today. But in 1794 Eli Whitney patented a device called a gin, which removed seeds from cotton, and by 1802 the U. S. cotton crop reached 100,000 bales.

• **King in the South**—From then on, cotton moved ahead by giant steps. The cotton textile industry expanded in England and began in the U. S. American cotton was going all over the world, almost the only cotton being exported. The South boomed.

The life of the South depended on it. It was hailed as king daily, and at least once a week, it was deified. By the 1890's the U. S. was growing three times as much cotton as all the rest of the world combined.

But the rest of the world was increasing its output, and some nations were boosting exports. Even so, in 1916, the U. S. grew 60% of the world's cotton crop. Today U. S. output runs only around 40% of the total, but it's still the No. 1 producer.

• **Current Records**—In 1950 the U. S. produced something less than 10-million



# Look, Mom! I Can Make Paint!



Any budding chemist can "stir up" a batch of paint... even match colors after a fashion. But it takes all the training, skill, and experience of a whole corps of technicians to produce an industrial finish that will charm the eye on the sales floor and stand up to daily use and abuse.

Zapon finishes are *engineered* for the job... designed to provide durable good looks at reasonable cost.

A plus feature of every Zapon finish is *Zapon Service From Every Angle* which takes care of even the little things that can become big problems. Zapon service starts with consultation right on the customer's own production line and follows through from formula, to raw materials, to the finish in the drum... furnishes help with all phases of finishing procedures.



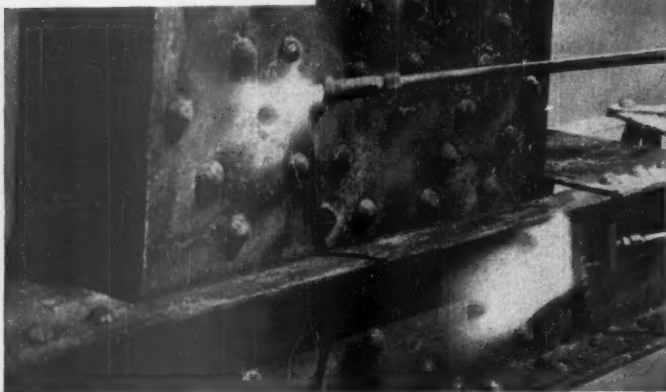
INDUSTRIAL  
FINISHES

**ATLAS**  
**POWDER COMPANY**  
WILMINGTON 99, DELAWARE

*For*  
*Industrial Finishes*  
STAMFORD, CONN.  
NORTH CHICAGO, ILL.

# Oxyacetylene Flame Cleaning speeds bridge repainting —without traffic interruption

**McCANN STEEL COMPANY**, Nashville, Tennessee, was asked to bid on a bridge conditioning and repainting job. It was essential that the work be done quickly and, most important, with minimum traffic interruption, since the bridge was located on a highly-travelled roadway. The most difficult part of the job was the removal of old paint and rust.



**F. T. Wilson**, Airco technical sales service representative, recommended oxyacetylene flame cleaning to remove scale and old paint prior to repainting. This process, requiring minimum equipment, leaves a warm, clean surface, which is conducive to a long-lasting paint job. Notice in the photograph how the rivet heads are being cleaned with a round tip and the flat surface is being conditioned with a wide flat tip.

The entire bridge was cleaned most satisfactorily, without disrupting traf-

fic too greatly. City officials were very pleased. Bids for reconditioning a second bridge across the Cumberland River will specify the use of flame cleaning.

If you have steel structures exposed to the elements, requiring long-time paint protection, investigate the advantages of Airco oxyacetylene flame cleaning. For technical service or copies of bulletins ADG-1066A, ADG-1067 and ADR-57, describing this process, please write your nearest Airco Office.



## AIR REDUCTION

AIR REDUCTION SALES COMPANY, AIR REDUCTION MAGNOLIA COMPANY  
AIR REDUCTION PACIFIC COMPANY

REPRESENTED INTERNATIONALLY BY AIRCO COMPANY INTERNATIONAL

Divisions of Air Reduction Company, Incorporated  
Offices in Principal Cities

**"... Production in 1951 is expected to pass 1950 by a large margin ..."**

**FIGURES OF THE WEEK** starts on p. 106

bales of cotton. (A bale averages about 500 lb., including the wrapping.) India and Pakistan—which together were No. 1 producers for centuries—were second last year with 3.7-million bales. The U.S.S.R. was third with about 3-million. Next came Egypt, Brazil, Mexico, China, and Argentina, with a total of 5.8-million. All the rest produced about 2.8-million, for a world total of a little under 25-million bales.

In the U.S. the 1950 crop came off about 18-million acres scattered through the Cotton Belt, which runs from the Atlantic Coast straight across the country to California, and from Florida and the Gulf on the south to Virginia southern Illinois, and Missouri on the north. The biggest producer was Texas, with almost 3-million bales, and behind it came Arkansas, Mississippi, and California among the leaders with one-million or more each. The trend of production is westward—more than half of U.S. cotton now comes from west of the Mississippi. In the old days, the south-east produced the lion's share.

• **Upswing Again**—In 1949 U.S. cotton acreage ran in excess of 27-million, with production more than 16-million bales. Production in 1951 is expected to pass 1950 by a wide margin, and, though no official guesses are out yet, it may even exceed 1949.

Big variations in output from year to year are due largely to the government's acreage-control program. The government expected a slack in cotton demand last year, so it cut acreage way down. In many cases, planters didn't even plant their allotted acreage.

• **Growing Season**—Cotton is planted and harvested somewhere in the world during every month of the year. But in the U.S., the crop starts going into the ground in the late winter along the Rio Grande, and planting is heaviest during March, April, and May through most of the belt. The growing season lasts from 180 to 200 days, and there has to be plenty of rain followed by some hot, dry weather for a good crop. Harvesting begins in July and runs through January and February and is heaviest in September, October, and November.

• **Mules and People**—A typical cotton farm—except in the Mississippi Delta and in the area from west Texas to California—is relatively small, often only a few acres. And though mechanization has made inroads, the cotton country still depends on mules and people for much of its labor.

A cotton farmer can't simply put his

seeds in the ground, jump out of the way, then harvest the crop. When the plants begin to come up, they may have to be thinned—generally with hand hoes. And they have to be weeded and cultivated, too. Dusting to prevent insect damage is another chore. Then if bugs or bad weather don't get the crop first—chances are often 30% that they will—the cotton is ready for harvesting.

• **More Seed Than Cotton**—Cotton-picking is still done mostly by hand, although on larger farms machines are doing some of it. But even after the cotton is picked, it still isn't ready for market until the seeds have been removed at the gin. For every 500 lb. of cotton baled, about 825 lb. of seed are left behind in the gin. About 125 lb. are used as seed for the next year's crop. The rest is crushed to produce cottonseed meal—a stock feed—and cottonseed oil—used for paint, margarine, etc.

The cotton comes out of the gin baled, wrapped in burlap or jute, and bound with iron ties. This is called a running, or uncompressed, bale. It is figured to weigh 500 lb. gross—though it usually weighs a little more. The cost of baling to the farmer has been figuring out to about \$10 a bale or 2¢ a lb. He usually pays this to the gin in seed.

• **Cash or Credit**—The next step is to sell the cotton. The farmer takes samples back to the center of town where he'll find someone who'll buy his cotton. It may be a regular cotton merchant, storekeeper, doctor, lawyer, or anyone else who has money or can supply the farmer with his food, clothing, and other needs. The farmer and the buyer will examine the samples and determine the grade, staple, lengths, and character of the cotton.

• **Grade**—Grade is established by the amount of foreign matter such as leaves and dirt in the cotton, plus its color. Middling is the standard grade. Strict middling is the next higher grade, and strict low middling is the next lower one. Staple length is the average length of the fibers. The standard staple length of American cotton is  $\frac{3}{8}$  in., but it varies considerably. Egyptian cotton is generally known for longer staples. Character refers to the strength of the fibers, their fineness, etc.

The Dept. of Agriculture provides sample boxes of various grades and staples, but the job of classing a bale of cotton is done by the eyes and hands of the buyer and seller.

• **Price**—When they agree on the class, they talk price. Generally the price will be quoted so many points (hundredths of a cent) per lb. on (above) or off (below) the going rate for cotton futures in the New York or New Orleans Cotton Exchange. When prices are low, the cotton farmer, like the wheat farmer, can borrow up to 90% of the parity price on his crop from Com-



"...most chair for the money I ever saw!"

"...best seat I ever sat on!"



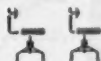
**COSCO**

"FINGER-LIFT"  
(Patent Pending)

Office Chair

TO PAUSE: Push foot against  
the foot rest, releasing pressure, seat  
and backrest will drop to rest  
TO ADJUST: Push foot against  
the foot rest

Posture Back  
adjusts 3 ways



In and out for  
depth of seat ...



Up and down for  
height of backrest



Tilts freely to  
"follow" the back.

That's the consensus of opinion among employers and employees, alike: Cosco "Finger-Lift" Office Chair is a better seat—a bigger value! Foam rubber-padded, revolving "saddle" seat raises or lowers—quickly, easily and positively—to any height between 16" and 20" ... backrest adjusts three ways. Durable, washable, vinyl plastic upholstery on seat and backrest in green, brown, maroon or gray; all-metal frame finished in gray, brown or olive green baked-on enamel, or chromium. Life-time lubricated, soft rubber casters, with ball bearing swivels. Ask for free demonstration at leading office equipment dealers. Or write for dealer's name: Cosco, Dept. BW-5, Columbus, Ind.

Illustrated: Model 16-C, gray enamel finish. Also 16-D, brown enamel; 16-G, olive green enamel; 16-B, chromium. Retail prices about \$29.95 to \$31.95 (slightly higher in Florida, Texas and Western states).

HAMILTON MANUFACTURING CORPORATION • COLUMBUS, INDIANA

Makers of COSCO Household Stools, Chairs and Utility Tables

# Symbols of GOOD Shipping



**R-F means Rocket Freight. Rocket Freight means Rock Island service.**

Rock Island service means the right combination of men, methods and facilities for doing a satisfactory transportation job.

It's as simple as that!

Rock Island directly serves 14 mid-continent states, and with its connections provides dependable service to all America...to foreign lands, too, through the Gulf Port cities of Houston, Texas City and Galveston.

For complete shipping information consult any Rock Island representative.



## Rock Island Lines

**"... cotton will probably be a trouble spot again ..."**

FIGURES OF THE WEEK starts on p. 106

modity Credit Corp. If he can't get more than 90% of parity later on in the market, he lets CCC keep the cotton. But today cotton prices are well above support levels, so everybody is selling instead of borrowing.

After it leaves the farm town, the cotton can go directly to a mill. More probably, it will be sold by the original buyer to a broker and shipped to a spot market. The Dept. of Agriculture has designated 10 cities as spot markets. These are: Norfolk, Augusta, Ga., Savannah, Montgomery, New Orleans, Memphis, Little Rock, Dallas, Houston, and Galveston.

• **Average of Spots**—BUSINESS WEEK'S Figure of the Week is the average price for middling 11-in. cotton at these 10 markets as reported by the New York Cotton Exchange. Normally, this price fluctuates considerably. But since ceiling prices were placed on cotton, it has been fairly stable.

Cotton is important as a Figure of the Week for several reasons. After wheat, it is the most valuable cash farm crop, and this year if high prices hold, and if the crop is as big as expected, it will probably be worth even more than wheat. Besides, cotton employs over 10-million, directly and indirectly, mostly in growing and processing.

• **Trouble Ahead?**—Because of the present emergency, cotton is in abnormally high demand. But when the emergency is ended, it will probably be a trouble spot again as it has been in recent years. Consumption of cotton hasn't been rising for a long time, and with development of synthetics it has fallen off.

Yield per acre in most recent years has been on the way up. That means that there will either be too much cotton or else a lot of people will have to turn to something else for a living. Many have. Southern farm population has fallen off considerably in the past 15 years.

• **Agricultural Revolution**—Growing use of machines also makes problems. It cuts costs so cotton can compete with other fibers, but it dislocates a lot of people—and animals. In the Far West, mules have been replaced almost 100% by tractors for plowing, planting, and cultivation. In the Delta, replacement is almost 80%, and in the Southeast, 50%. Picking is going machine, too. About 30% of California's crop is picked by machines, 40% to 50% of the Texas-Oklahoma crop is stripped by another kind of machine, and in the Delta around 15% is picked mechanically. All this means dislocation and social problems, and it all will have impact on business in general.



# Important Information

**I**F you are a producer of products using steel, aluminum or copper, it is vitally important that you know what Controlled Materials Plan forms apply to your industry and how you may obtain them. We think the information on the three basic CMP forms listed below will be helpful.

**FORM CMP-4A:** For any producer of Class A products who is requested to apply for an authorized production schedule and related allotment by a Claimant Agency or consumer for whom he produces Class A products.

**FORM CMP-4B:** For any producer of Class B products who is requested by NPA to file an application with the appropriate Industry Division for an authorized production schedule and related allotment.

**FORM CMP-4C:** For any person requiring an allotment for controlled materials for use in construction.

Further information on Class A and Class B products, as well as applications for CMP authorizations and allotments on these three forms, are available at your local National Production Authority field office or their headquarters in Washington.

## We also direct your attention:

**TO CMP REGULATION NO. 4** which sets forth the rules under which distributors such as ourselves may make deliveries of controlled materials to their customers.

**IT IS IMPORTANT** for you to know that whenever you place an *authorized controlled material order* with a distributor either orally or by telephone, it must be followed by a written confirmation within 15 days. If a customer fails to comply with this provision, a distributor is

required to report the delinquency to the National Production Authority.

**WE THEREFORE URGENTLY REQUEST** that directly after placing an authorized controlled material order either orally or by telephone with your distributor, you immediately send him a written confirmation. By doing this you will protect yourself and help your distributor and the National Production Authority keep CMP working smoothly.

## UNITED STATES STEEL SUPPLY COMPANY

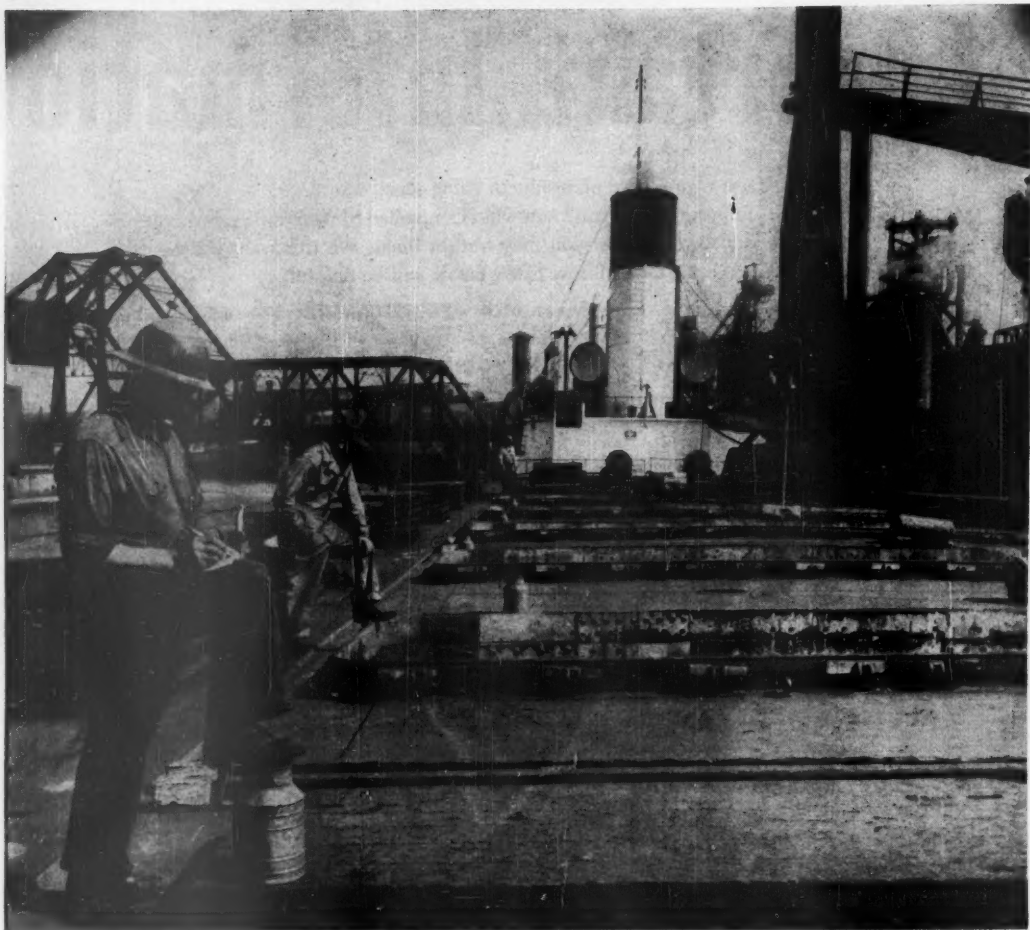


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Headquarters Offices: 208 S. La Salle St.—Chicago 4, ILL.

UNITED STATES STEEL

# SMALL BUSINESS



ORE BOAT IN PORT means plenty of work for the chemist assigned to sample and grade the natural iron content.

## A 1-oz. Sample From 10,000 Tons of Ore

Three small chemist companies are riding high on the crest of the iron-steel boom.

As each ore-laden boat reaches the foot of the Great Lakes, it is met at its receiving port by a chemist from one of these companies: Textor Laboratories, Cremer & Finx Co., or Crowell & Murray—all of Cleveland. The chemist's job is to sample every cargo of iron ore received at a down lake port. He acts as umpire in the buyer-seller game.

• **Chemist Has Final Say**—At the Cleveland laboratories, the sample is analyzed for at least three things: water content, natural iron and silica, and phosphorus. The buyer and seller get the results within 24 hours to 36 hours

after the unloading operation starts. A clause in the contract between buyer and seller makes the findings of any of these chemist companies final.

It's a very important step in the transactions between ore producers and steel makers, because the percentage of natural iron content determines the value of the ore; 51.5% is norm, and prices scale up or down from that.

Buyer and seller split the charges for the chemical lab's services. Costs are on an escalator scale, depending on the size of the vessel.

• **First Step**—The chemist assigned to a job follows a procedure that is standardized to the point of ritual. He's among the first to skip up the gang-

plank when the boat docks. Invariably, he's armed with a scoop of exactly 4-lb. capacity, the handle and scoop measuring exactly either 12 in. or 24 in. long. He also has a hammer with a handle exactly 12 in. long and a container with a capacity of 35 lb. of ore.

On a 32-hatch boat, he takes samples from 16. The ore is below the hatch in a dome-shaped mass extending across the width of the ship. The unloading machine scoops through the middle of this dome clear across the width of the ship to a depth of perhaps 6 ft. These unloaders remove 17 yd. at a bite.

• **Into the Trench**—Once this trench is formed, the chemist clammers down. Starting at one end of the trench and



**"I get rich through inefficiency,"**  
*says the Paperwork Pirate*

**P**ILING up hidden costs. Encouraging errors. Slipping in as much overtime as possible. Taking the long way around instead of short cuts. These are some of the tricks of the Paperwork Pirate (unnecessary clerical costs).

There is no greater opportunity for saving time—and money—in the average office than by mechanizing the repetitive writing. And most business writing in both office and factory is repetitive writing.

With Addressograph methods you can write code numbers, names, dates, parts descriptions, shipping

data—anything at all—quick as a wink. Writing speeds are 30 to 50 times faster than with ordinary writing methods. There's never an error. Legibility is tops.

Why not get rid of the Paperwork Pirate? You can lower your costs, save days in getting your work out, reduce overtime, increase productivity and improve customer relations with Addressograph methods. Call the Addressograph man or write Addressograph-Multigraph Corporation, Cleveland 17, Ohio—Simplified Business Methods.

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# **Addressograph-Multigraph**

**Production Machines for Business Records**

**SERVING SMALL BUSINESS - BIG BUSINESS - EVERY BUSINESS**

**CURVED METAL SHAPES  
BATH CAN STRETCH OR  
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IN ALUMINUM, STAINLESS  
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We can stretch-form and compression-form the curved metal shapes required in your production. Single or compound curves, constant or varying radii. Structural members from all shapes of extrusions and formed sections. Accurate part-to-part duplication. 10 years successful service to aircraft, automotive and other industries. For estimates, send blueprints and advise quantities required.

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Air Conditioning brings  
real comfort to leisure  
hours...



**Chrysler Airtemp**

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Airtemp Division of Chrysler Corporation  
Dayton, Ohio  
In Canada: Therm-O-Rite Products Ltd., Toronto



A TRENCH is scooped out in one of the holds by ore unloader. Chemist, armed with his 4-lb. scoop, a hammer, and a container, sets about getting samples.



SAMPLES are dumped on top of water balance tanks. Chemist and his assistant break up ore, mix it, and mark it off into quarters. Two opposite quarters go back into hold.

at the bottom of the freshly exposed ore, he takes a standard scoopful of ore,  $\frac{1}{2}$  lb., for every two feet along a vertical line extending from the bottom to the top of the trench—using the scoop and its handle as a measuring device. If he runs up against hard or rock ore, he hammers off a chunk about half the volume of the scoop. He dumps all

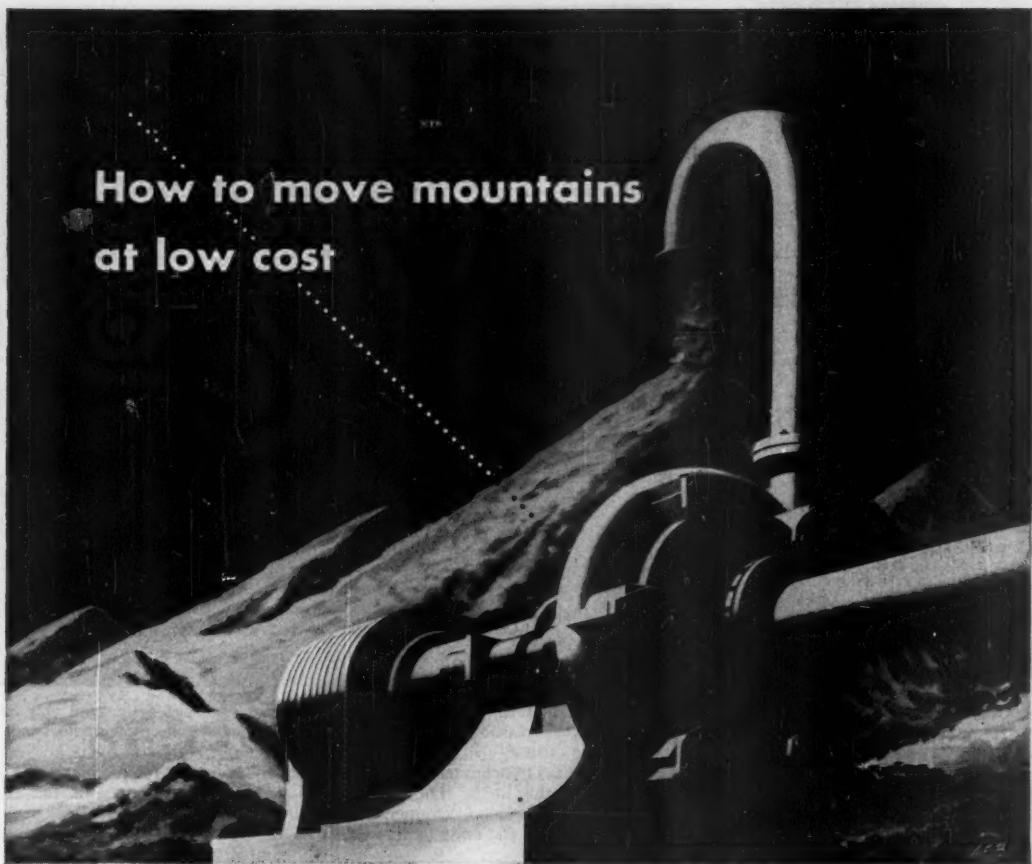
this iron ore into his 35-lb. container.

After he gets samples on this vertical line, the sampler measures off with his scoop and handle four, six, or eight feet—depending on the size of the cargo—and samples along another vertical line. He repeats this until he completes the circuit of the trench.

Meantime the unloading machine



## How to move mountains at low cost



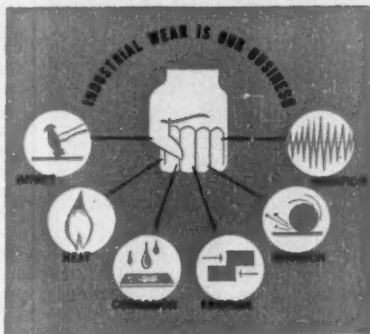
### SLURRY, SAND, ASH OR GRAVEL... Amsco pumps lick them all

For 30 straight years, thousands of tons of coarse, abrasive ash have poured through an Amsco pump in a midwest power plant. This tough, wear-resistant unit not only has survived this severe wear but has cut handling costs by 65%. Another Amsco pump handling sharp toothed coal slurry turns out *double* the daily work, with 3 times the service life of the previous pump. Performance like this depends on good design and selection of the right metal for the job.

Amsco pumps are engineered for low-cost handling of materials. They are

simple in design, extra rugged in shaft and bearings, and are adjustable to hold highest efficiency. These are features that reduce maintenance time and costs. No matter whether the conditions of wear on the job are impact, abrasion or corrosion, Amsco pumps are fitted with the metal best suited to give long life and satisfactory service.

Years of practical field engineering experience have equipped our Amsco engineers to design or recommend the pump that will solve your pumping problem. Write Department A for illustrated literature.



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**Brake Shoe**  
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10 Divisions of American Brake Shoe Co. produce wear-resisting parts in 55 American and Canadian plants.

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## IS YOURS A WASTE TREATMENT HEADACHE?

More and more industries are being required by law or are finding it profitable to treat industrial wastes before dumping them into sewers or streams. Hardinge offers a cure for this problem with their Clarifiers, Hydro-Classifiers, Thickeners, and ABW Sand Filters. Hundreds of successful installations have been made in the oil refining, coal mining, glass, paper, and other industries.

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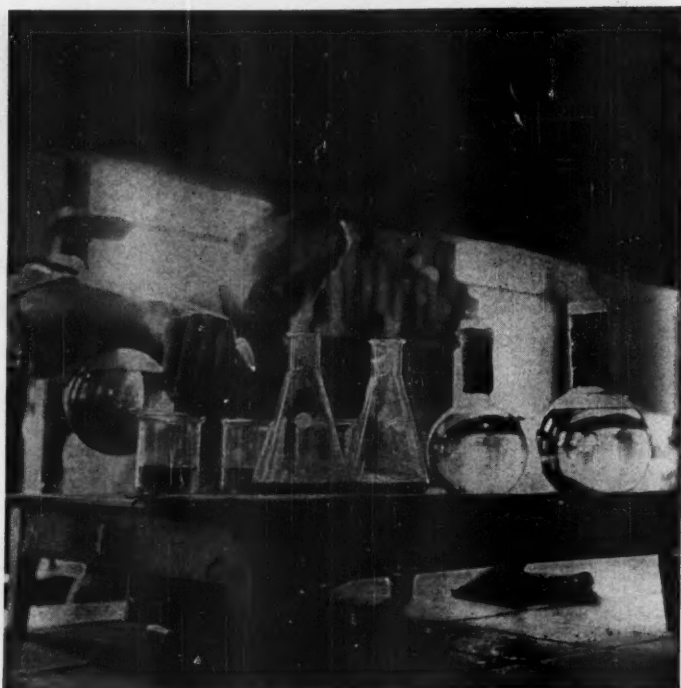
Fred G. Timmer, President

TERMINALS

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**BACK AT THE LAB**, sample is pulverized, quartered again and again, until only one ounce is left. From that one ounce the cargo is tested for iron ore content.

has made similar trenches on each dome of ore in the other holds. The sampler trails behind with scoop, hammer, and can to go through the same motions in each hold.

He goes back after more ore has been moved and another trench has been made for him. That goes on until the unloading machine reaches the skin of the vessel. About the only time you see the chemist is when he pops out of one hatch and into another.

• **Quartering**—When the container is filled, it is dumped on the head of the water balance tanks under the deck, where it will be sheltered from rain (water content is part of the analyzing job). When three or four containerfuls are gathered, the chemist's helper breaks up all rock ore collected so it will pass through a 1-in. mesh. At that point the ore looks like hand-mixed mortar. After a thorough mixing, the 150-odd pounds are patted out and marked off into quarters. Two opposite quarters are tossed back into the hold. The remaining two are mixed again and again, quartered, two opposite quarters tossed back into the hold—and the procedure is repeated until the chemist finally ends up with about a pound, or maybe less.

That procedure is continued through the entire cargo. Then the chemist clammers up from the deck, mops his

face, and takes off for his office with a 35-lb. sample that represents the 10,000-ton cargo.

• **One Ounce for Lab**—When this 35-lb. sample reaches the laboratory, the ore is first dried and the water content determined. It's then pulverized so it can pass through a 100-mesh screen. Then the business of quartering starts all over again, until only one ounce is left. From that one ounce the cargo is tested for actual iron ore and silica content and other qualities. End results of the analysis are compared with the ore seller's guarantee of his product.

The sampling aboard the average ore boat will take in all about 1,200 lb. from the cargo to get 35 lb. for the lab to get one ounce for the final test.

There's a difference in the way a company that mines its own ore for its own blast furnaces works. There the sampling and determinations are not nearly so precise as in the case of a buyer-seller deal. Reason is that iron ore is sold on a guaranteed basis—so much natural iron ore content, not more than so much phosphorus, sulfur, etc. If the iron content is above the guarantee, the seller is paid for the extra units—or if there is less iron, then so much per ton is deducted. It is necessary to know the amount of sulfur and phosphorus so that ores can be balanced through blending.

## Which pile of work was written on **ROYAL** Electric?

### The bigger pile, of course!

For Royal Electric speeds up any kind of office work immeasurably.

You can increase letter writing . . . turn out more invoices . . . increase stencil production . . . free typing personnel for other work.

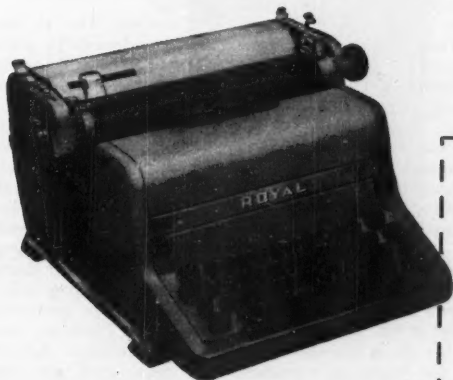
Learn about these and other cost-cutting possibilities now! Find out how Royal Electric can bring office costs down.

Royal Electric is the long-preferred Royal Standard *with power added*. Like the Royal Standard, it is made by the world's largest manufacturer of typewriters. Royal makes the finest, most rugged, most dependable writing machines ever built. They stay on the job longer . . . less time out for repairs.

**Hint to management:** Want to raise morale among your typing people? Get Royal Electrics. They virtually banish operator fatigue!

STANDARD **ROYAL** ELECTRIC

Made by the World's Largest Manufacturer of Typewriters



SEND IN COUPON NOW!

Royal Typewriter Company, Inc., Dept. 110  
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I would like a copy of the brochure, "Picture of Progress," describing the Royal Electric.

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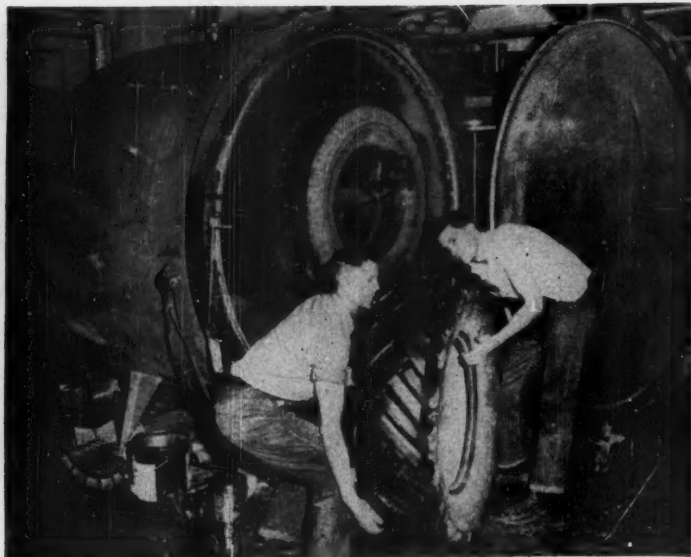
COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_





IN BRITAIN, Vacu-Lug retread process saves dollars on imports of new tires.



IN THE U.S., it's the farmers who save by working old tires longer. This relugged tire has come out of a Vitacap curing chamber. One chamber will hold many sizes of tires.

## Putting New Lugs on Old Tires

There are about 4-million tractors at work on farms in the U.S. Each of them has two big, lugged tires on its drive wheels. In anywhere from six months to five years—depending on the type of soil and amount of use—these lugs have to be replaced.

• **Partnership in Lugs**—Those facts are the basis for a thriving little business partnership between Vaughn Rawls, inventor of a quick and effective way of putting new lugs on tires, and American Tire Machinery, Inc., in Muncie, Ind. American Tire is one of the country's oldest makers of tire recapping molds.

The Rawls process is called Vacu-Lug. American Tire makes the equipment for the process and sells it to franchised shops. Right now there are 49 of these shops in the U.S.—doing a total of about \$250,000 worth of business a month—and several in Britain. By the end of the year, American Tire expects that more than 100 shops will be franchised.

• **Selling Points**—To the farmer, the selling points of American-Rawls' Vacu-Lug retread are economy and speed. When lugs wear down, most farmers are resigned to the alternatives of (1) sending their tires back to the manufacturer for retread (that sometimes takes months), or (2) buying a new set of tires that cost about \$85 each. A Vacu-Lug shop will return a relugged tire to the farmer within 48 hours and

will charge him only about \$60 a tire for the job.

To the tire shop, the selling points of installing the Vacu-Lug process are an active, noncompetitive market and relatively low initial investment. American Tire franchises are laid out according to tractor registrations. Each franchised territory has about 12,000 tractors, which the company figures will provide enough business to keep one shop working continuously.

By the nature of the Vacu-Lug process, a shop's initial investment is small. The total bill for equipment that will relug anything from a small airplane tire to a huge earth-mover tire is only \$10,000. Conventional retread molds to do the same job could cost as much as \$200,000 and would take up far more floor space.

• **Pressure Cooker**—The key machine in the Vacu-Lug process is the Vitacap steam chamber, an American Tire invention that looks and works something like a huge pressure cooker. It is used to cure the new lug onto the old tire after the lug has been cemented on. The largest and smallest tire will fit into the chamber with equal ease. And temperature control, one of the things that baffled Rawls for years when he was working independently on the process, is accurate in the Vitacap cooker.

Curing in the steam chamber is the last step in the Vacu-Lug operation. The process begins with a thorough

examination of the tire shoe to make sure that it has a good, undamaged foundation. Then the tops of all the worn lugs are carefully buffed and cleaned. Next, a specially prepared cement is worked over the lug areas. New rubber lugs are placed on the cemented areas, then hammer-stitched to the tire. Finally, the whole tire goes into the steam chamber for an hour-and-a-half heat treatment.

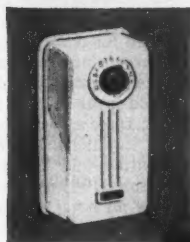
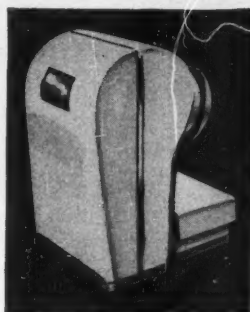
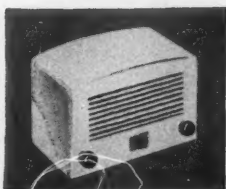
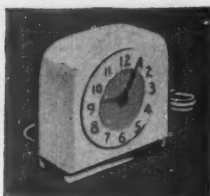
• **Good as New**—According to American Tire, the new lugs are on just as tight as if they were part of the original tire. What's more, the company says its relugged tires have actually outpulled new tires—and without any noticeable damage.

Goodyear Tire & Rubber Co. recently endorsed the process, after two years of tests, as "... the best method of restoring maximum traction to worn tractor tires at the least possible cost."

• **Rubber Supply**—Goodyear and Webster Rubber Co. of Warren, Ohio, supply all the lug stock used in the Vacu-Lug process. The shops could use more, and American Tire officials are confident that they will get it. The company has a strong argument to put before National Production Authority: Instead of putting 100 lb. of rubber into a new tire, an old tire can be fixed up by the Vacu-Lug process with only 25 lb. of rubber. And there's a saving on nylon cord, steel wire, and man-hours, too.



## Housing Problems?



18 <sup>28</sup>  
proved benefits of  
Plaskon molded color  
help make housing  
better!

*E*ACH ONE of the 28 desirable properties of Plaskon Molded Color has proved itself a benefit in the manufacture of certain products. Naturally, the amazing diversity of these properties makes it impossible for any one product, or any single line of products, to utilize all of them to advantage. But it's surprising how many products can utilize a majority of these proved benefits of Plaskon Molded Color! In the compression molding of housings, for example, here are 18 reasons why Plaskon Molded Color can help make them better:

*Economical to use*  
*Light in weight*  
*Wide range of*  
*translucent and opaque colors*  
*Permanent, non-fading solid colors*  
*Color uniformly*  
*Smooth, non-porous easy-to-clean surface*  
*Won't tarnish or corrode*  
*High flexural strength*  
*High tensile strength*

*Resistant to chipping, checking or shattering*  
*Dimensional tolerances highly accurate*  
*Non-conductor of electricity*  
*High heat resistance*  
*Low-heat transference*  
*Non-inflammable*  
*Resistant to dilute acids and alkalis*  
*Unaffected by oils, fats, greases, waxes*  
*Completely resistant to commercial solvents*

Whatever your product, it may pay you to discover how many of the 28 desirable properties of Plaskon Molded Color—Urea or Melamine Formaldehyde—can help to make it better.

**PLASKON DIVISION • LIBBEY • OWENS • FORD GLASS COMPANY**  
Toledo 6, Ohio

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Manufacturers of Molding Compounds, Resin Glues, Coating Resins

**PLASKON.**

MOLDED COLOR



When these logs are pulled up the chute toward the chipper they are taking the first step toward becoming a Gaylord Shipping Container.

Throughout the entire complicated procedure of converting wood into paper—sharp-eyed technicians are constantly checking quality, making adjustments, testing to be absolutely sure that the end product is as strong and tough as it is possible to make it.

This quality control by experts is one reason why Gaylord lists many of the world's largest users of shipping containers among their satisfied customers.

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**KRAFT PAPER AND SPECIALTIES**

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## **COMMODITIES**

### **Naval Stores Tight**

**But Toxaphene, insecticide that is a big user of turpentine, eases pressure by finding a new source in kraft waste.**

Naval stores these days are tight as a well-calked ship. Old stocks of turpentine and resin are down past the danger point. The new crop has been hurt by cold nights and dry weather. Prices are way up yonder (though not so high as they were in March).

• **Insecticide**—Bad as the situation is, it just missed being a lot worse. Just as the squeeze began to build up, chemists at Hercules Powder Co. figured out a way to take the strain off turpentine.

One reason for the big demand for turpentine is Toxaphene, the insecticide that has been sweeping the farm market since Hercules put it on sale five years ago. Toxaphene slaughters boll weevils, grasshoppers, army worms—just about everything that crawls or flies and eats too much. But it also slaughters the supply of chlorinated camphene, which is made from turpentine and is the material that gives Toxaphene its lethal zing.

Farmers have been yelling for more Toxaphene; by last spring Hercules was ready to run up more production. Then came Korea and a heavily accelerated demand for naval stores. Where to get the turpentine for expansion?

• **New Source**—Hercules, whose chemists had spent 10 years developing Toxaphene, came up with the answer. Chlorinated camphene had come from wood turpentine—and the wood process has been since 1945 the source of more than half of all naval stores.

The chemists had discovered that camphene could also be recovered from sulfate wood turpentine, a byproduct of kraft paper making. Now they found that this type of camphene would work just as well in Toxaphene as that made from the scarce and badly needed wood turpentine. Recovery from the kraft process requires special equipment. So Hercules has offered to underwrite installation of the machinery at any kraft mill that will use it.

The Hercules people expect plenty of takers. And they're hoping for an adequate supply of camphene to feed their main Toxaphene plant at Brunswick, Ga., plus a new plant in Hattiesburg, Miss., which is designed to boost production 50%.

• **Wood vs. Gum**—If it all works out as planned, everybody should be happy:

Before a manpower crisis hits **your** office

provide the { **Added**  
**Business of** **AUDIOGRAPH** dictation!  
**Capacity**



*We regret that we cannot always deliver AUDIOGRAPHS without delay. But demands have exceeded all precedent . . . and these days we're also devoting much of our efforts and raw materials to national defense work. So—if you're waiting for delivery of your new AUDIOGRAPHS — won't you please be patient? You'll find them well worth waiting for!*

**E**ver consider the possibility of a manpower crisis in *your* office?

The growing demands of the Defense Program are already having their impact on offices throughout the country. This may strike you sooner than you think!

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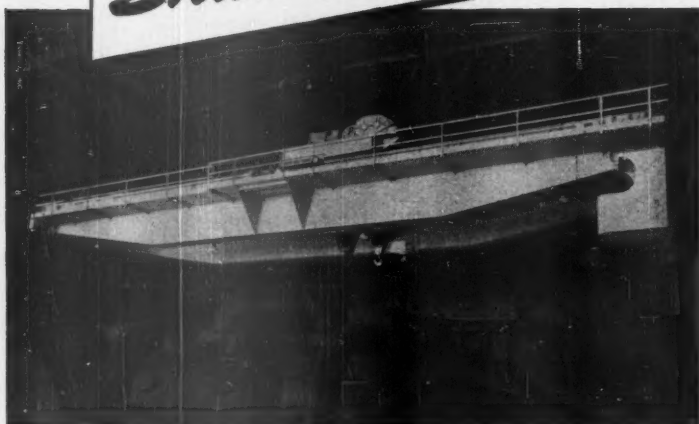
● Name.....

● Title..... Firm.....

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300 tons or 500 lbs.—whatever the load—there's a powerful "Shaw-Box" Crane to lift it. From quarter-ton crane to multi-motored traveling giant, "Shaw-Box" makes them all.

For over 60 years — in times of peace, preparedness and war — American industry has been solving countless load-handling problems with thousands of "Shaw-Box" Cranes. Thorough dependability, stamina and efficiency account for the fact that many of these rugged cranes are still on the job after more than

two generations of service.

Whether you are modernizing, building or buying a plant, select "Shaw-Box" Cranes. The know-how and experience of an organization devoted exclusively to the development and manufacture of load-handling equipment is your assurance of all that's worthwhile in design, engineering and construction. Whatever the requirements or conditions of service, you can be certain of low maintenance, economical handling and complete safety for man, crane and load.

Write for Catalog No. 217 showing "Shaw-Box" Full Electric Traveling Cranes from 5 tons capacity up; Catalog No. 218 for "Load-Lifter" Cranes from 1 to 25 tons.



## SHAW-BOX CRANES

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**"... Just when all naval stores are at a premium, the gum department falls off ..."**

**COMMODITIES** starts on p. 122

The kraft mills will have a use for what used to be largely a throw-away byproduct. The farmers will get their Toxaphene. And some of the pressure will be taken off the hard-pressed producers of wood naval stores.

That pressure is heavy right now. Here's why:

In the old days most naval stores used to be of the gum type. Farmers, by a still wholly primitive process, tapped the gum from about 75-million Southern pine trees.

About 40-odd years ago, wood naval stores were developed. Here the turpentine and rosin were distilled from the debris of lumbering operations—the stumps and branches of Southern pine trees. The centralized and highly mechanized wood naval stores didn't catch up with the gum producers until 1945. Since then, they have turned out more than half of total production.

• **Farmers Quit**—Production of gum naval stores—mostly a part-time occupation of farmers—has a tendency to fall off in boom times. The farmers flock to the cities to pick up the higher industrial pay. That's happening now, as usual. Just when all naval stores are at a premium, the gum department falls off.

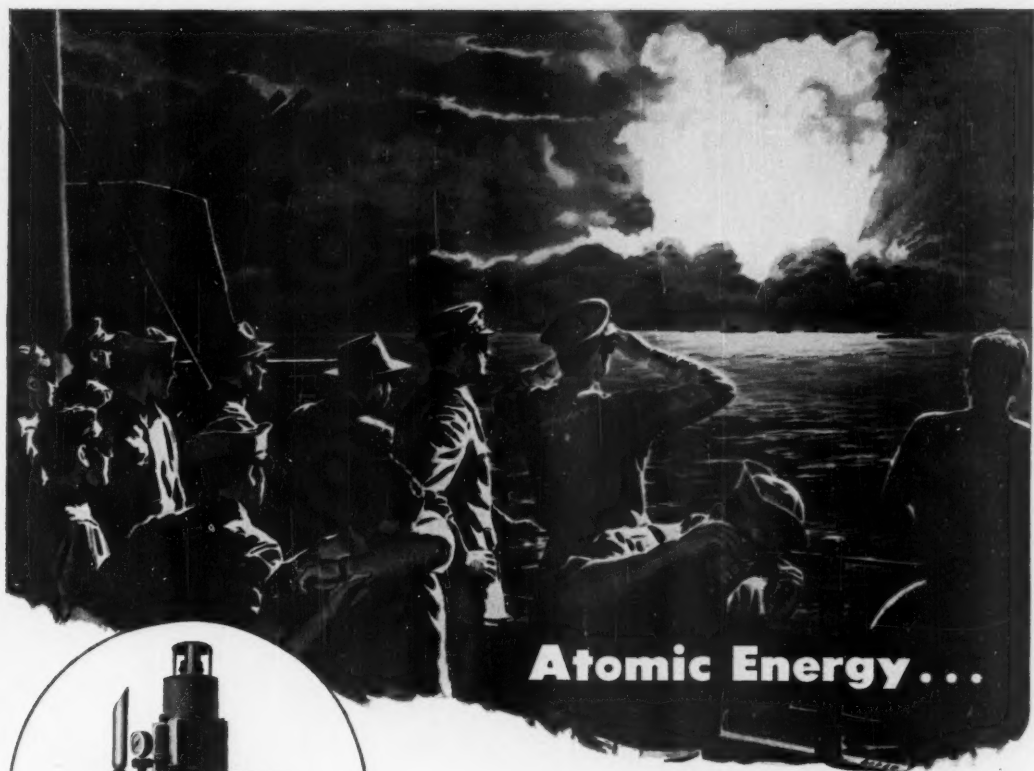
The result is added incentive for the wood naval stores producers. But the government is not sure that they can take up the slack. That's why it has slapped on export licensing and is tightly restricting the use of the stocks now held by the Commodity Credit Corp.

Meanwhile, the naval stores market is in the doldrums. The big factors have stopped buying, waiting for prices to go down. They want to see the new crop level out at 70¢ to 75¢ a gal. for turpentine tankcar at Savannah, Ga. The present market is at 76¢—down from 92¢ in March—but little is being offered.

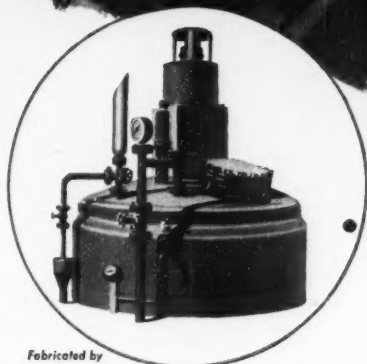
• **Moving Slowly**—Old stocks are practically exhausted, and the new crop is moving very slowly to market, as producers wait around for a price rise. But some experts expect a downward trend, at least partly countered by government buying. CCC stocks had reached a critical low in March, with less than a month's supply.

The situation is much the same for gum rosin, with very few sales in sight. The price now is \$8.79 per 100 lb., down from \$9.25, but way above the April, 1949, ebb of \$5.64.





**Atomic Energy...**



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an equipment builder  
using the Lukenomics principle.*

Here's a sample of Lukenomics coordination at work. For high purity in Chloromycetin—vital new antibiotic—acid adjustment tanks and fermentation units were built of Lukens Inconel-Clad Steel with specially polished interiors. *Bonus* results: low initial cost, minimum maintenance, special resistance to corrosion threats of salt and other chemicals. And—by use of *clad*—the builder also saved critical amounts of one of today's scarce metals.

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... whatever your business, if it depends on a production or process operation, consider this: *in the current emergency, how long can you keep on producing?* Here's an idea that may help.

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This coordination of effort we call Lukenomics. Through it, such equipment builders combine their specialized experience, and that of competent designers and engineers, with Lukens' knowledge of materials, their production and use.

We can put you in touch with such builders. Write today, outlining your problem. Manager, Marketing Service, Lukens Steel Company, 483 Lukens Building, Coatesville, Pa.

*Promote steel production generally—speed sale of your scrap.*

**LUKENS**

LUKENS STEEL COMPANY

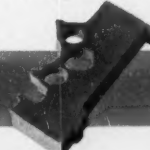
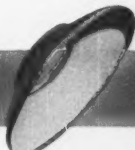
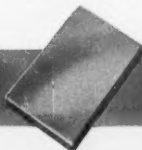
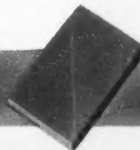
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## **HOW DID THEY KNOW HOW?...**

Not just from what each learned way back in school. Not just from what immediate associates passed on. Not by pure cerebration either. All these helped. Nothing could have been done without them. But they were linked together by...

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The business press of America, the industrial and trade and business and professional publications... the American Inter-Communications System. They are the common carriers of business and professional ideas... methods and mistakes, practice and theory, new and obsolescent techniques, news, conjectures, hopes. It is a sober fact that the business press helps make what America makes possible. It sees all, hears all, and tells...

## **HOW WE HAPPEN TO KNOW...**

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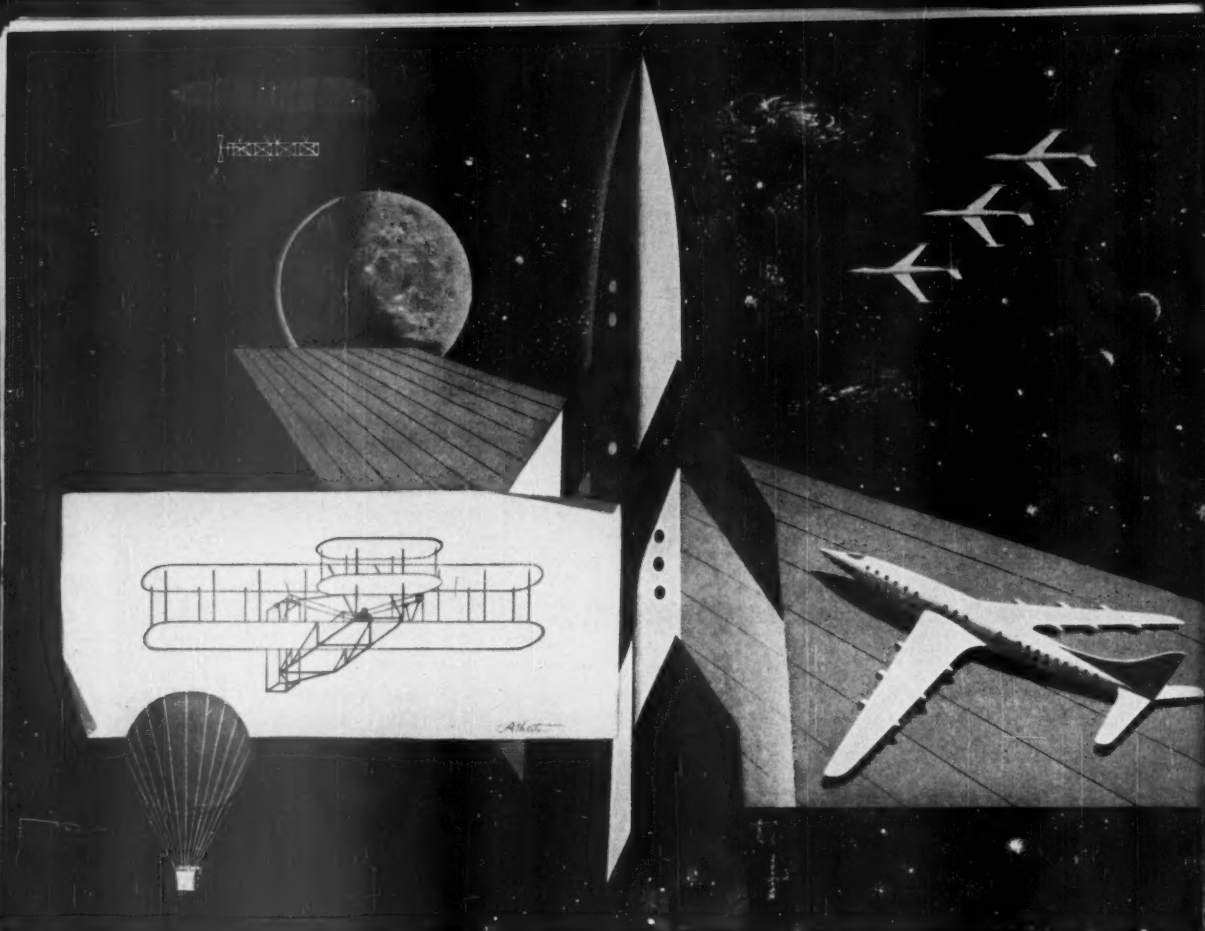
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H E A D Q U A R T E R S   F O R   B U S I N E S S





## Aviation...and The National City Bank of New York

Now that man has burst through the sonic barrier and flown planes faster than sound travels, no one can safely put limits on how fast—and how far—we may eventually fly. Even the planets are immeasurably closer than they were just a few years ago. A velocity of seven miles a second is needed to overcome the earth's gravity, and the rocket that recently soared 250 miles into interstellar space attained a speed of more than a mile and a third a second!

Breath-taking as this sounds, it is even more startling when you realize that the aviation industry has flown, fought and researched itself to this point less than fifty years after the Wright Brothers managed to get a plane off the ground for 59 seconds! Last year this country's scheduled airlines flew 16.8 billion passenger-seat miles. They flew freight, express, and mail 284 million ton miles, for a total operating revenue of \$811,768,656. The value of commercial

aviation's speedy, dependable transportation to our country's economy parallels the contribution military aviation is making to our country's defense.

Like many another rapidly expanding industry, aviation has relied upon services and facilities of The National City Bank of New York for necessary help in its growth, and most of the major producers and airlines use the Bank's varied services. These are quickly available anywhere in the United States or in the world, through Head Office at 55 Wall Street, 67 branches in Greater New York, and correspondent banks in every state. Overseas, National City has 53 completely staffed branches and correspondents in every commercially important city.

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# MANAGEMENT



THE BIG BOSSES turn out for the excitement as Standard Railway stock goes on the Big Board for the first time.

## Standard Railway Joins Public Ownership Trend



SATISFACTION shows in the stance of Standard Railway's president and board chairman as the ticker tape shows Standard's stock at 16½. Symbol: SRY.

Standard Railway Equipment Mfg. Co. of Chicago put on long pants last week. For the first time its stock became a listed security. Trading of the stock began June 4 on the New York Stock Exchange and the Midwest Stock Exchange.

This was the final step in Standard Railway's evolution from a one-man company to public ownership. Until 1943 it was owned entirely by the late Walter P. Murphy. Today Standard Railway has 7,500 stockholders across 46 states.

• **A Major Trend**—In many ways the story reflects a major trend in American business: the gradual demise of family or closely held corporations. The reason in most cases: high inheritance and estate taxes.

World War II's steep taxes gave a hard shove toward public ownership (BW—Aug. 17 '46, p. 57). A lot of old well-established companies began making their first public offerings for the strong stock market of 1945 and early 1946.

• **Two Ways**—Some companies bring the public in with an initial offering of brand-new stock. But more often, the owning group simply sells some of its previously issued shares to outsiders—ordinarily through investment banking houses.

Standard Railway—which makes 80% of all the corrugated steel roofs and ends used for railroad freight cars—is a good example of this process.

• **Tightly Held**—The company got its start in 1889 as a family proposition. In 1926 Murphy bought out his brothers



It's a steel "lens" for a street lamp, replacing the breakable plastic lens. Formed from Wheeling Expanded Metal, it's literally *solid steel you can see through*—proof from vandals' stones—yet freely passing both the light of the lamp itself and the air that cools the high-wattage bulb! Not woven, not welded, but pierced and stretched from a single, solid sheet of sturdy steel, Wheeling Expanded Metal is truly *your material of a thousand-and-one uses.*



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Louisville Minneapolis New Orleans New York Philadelphia Richmond St. Louis

**"... From there on it was just a matter of time until Standard Railway went on the Big Board ..."**

**STANDARD RAILWAY starts on p. 129**

and launched the present corporation. He ran it with iron-hand control until he died in 1942.

But Murphy had no family of his own. So he willed his fortune to Northwestern University for a technological school—with one provision: The university was to sell Standard Railway to officers and employees of the company.

They bought it in 1943, paid off the school in 1945, split the common stock five for one, and retired all the preferred. But the company was still tightly held—with only a handful of stockholders.

• **Public Offering**—After the death of two of the company's officers, top management decided it was time for a public offering.

Through Smith, Barney & Co. and the Illinois Co., the officers sold 365,000 of their old shares, and the company sold 135,000 new shares. The Walter P. Murphy Foundation, set up before Murphy died, also disposed of some stock.

• **First Step**—That was Standard Railway's first step in its new role. Ownership was still about 60% in officer and employee hands—but the public now owned the other 40%, and with that came the first big change in management. An outsider—R. A. Williams, vice-president of American Car & Foundry Co.—was called in as president.

In 1950 another public sale was made by officers and the foundation, this time 160,000 shares. Now the public held control—about 60% to 40%.

From there on it was just a matter of time—"seasoning," as brokers call it—until Standard Railway went on the Big Board. Stockholders numbered 7,500. Pressure from them for a ready national market sent management to Wall Street.

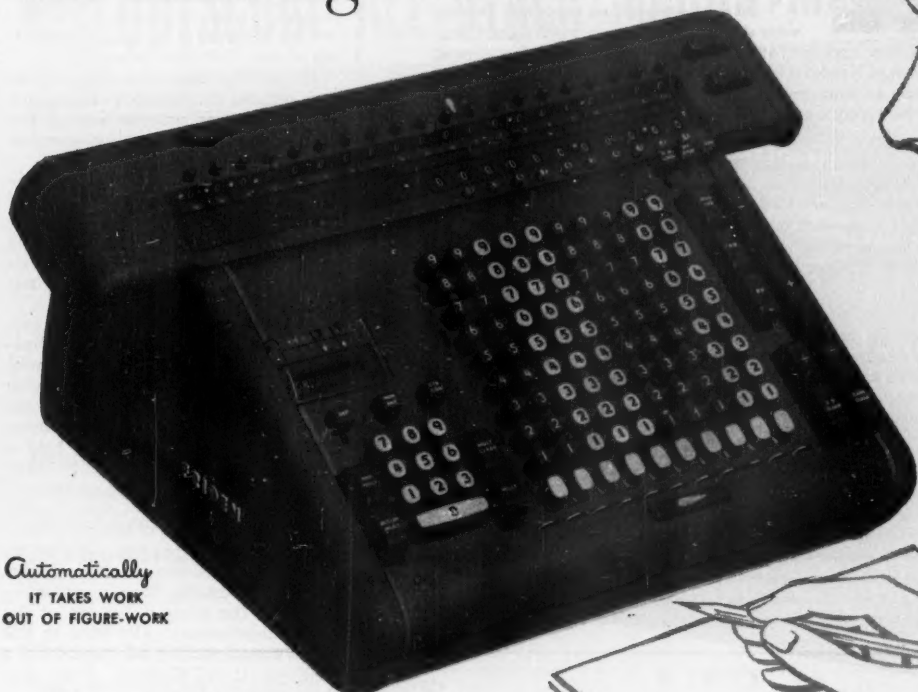
• **Just Grew Up**—As far as the company is concerned, it makes little difference. The big stockholders already had a good market for their securities over-the-counter. No new financing was necessary; the company was free (still is) of any bonded or bank indebtedness.

"What it amounted to," says President Williams, "was jumping into the fish bowl. It had to come—we just grew up."

Besides, management figures a national market for the stock will make any future expansion easier to finance. And Williams readily admits diversification into fields outside the railroad industry is under study all the time.

# Inventory goes double-quick on the Friden - The Thinking Machine

To hold down on overtime costs...you should see the Friden *fully-automatic* Calculator do the figure-work of inventory. This machine "remembers"...produces both individual extensions and accumulated totals. Carriage clears automatically



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today's large volume of office figure-work but they also handle intricate, highly technical calculations throughout Borg-Warner plants. Automatic features and operating simplicity conserve staff time."

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# Rockwell Report



by W. F. ROCKWELL, JR.  
President  
Rockwell Manufacturing Company

NEW YORK papers recently happily reported that the city's reservoirs are nearly full. Thus the water shortage of a year ago, which seemed likely to eliminate New York from the thinning ranks of cities resisting universal metering of water, is ended at least temporarily. Since we're one of the principal manufacturers of water meters in the country, obviously we have a deep interest in New York's position.

Water supply experts say that 100% metering is the only answer for New York's dilemma, for water costs will increase as sources are developed further and further away from New York. Water-short California learned long ago that metering, by cutting waste, not only conserves water but lowers its cost and divides the cost according to the amount used instead of penalizing all for the water waste of a few.

While New York holds out against metering, the use of meters is required in most parts of the country. Consequently, as population has grown and residential and industrial building progressed, our Brooklyn and Pittsburgh meter plants have worked around the clock building all sizes of meters for any water load, and special designs for temperature extremes of northern winters and southern summers.

• • •

Absence of port facilities is no barrier to loading or unloading oil tankers off the California coast. Through submarine pipe lines, oil cargoes are handled between tanks on land, and ships anchored beyond shallow shore waters. Terminals in the ocean are marked by buoys and the ends of the underwater hoses are sealed tight against encroachment of salt water by our Nordstrom lubricated plug valves.

• • •

Most headlines covering outstanding research achievements are focused on universities, foundations or the giant laboratories of a few large companies. Yet often some of the most basic discoveries come out of small industrial laboratories, little heralded.

Two of our decentralized laboratory units have recently announced important developments. The laboratories at our East Chicago, Indiana subsidiary, Edward Valves, Inc., have distributed the results of research on flow through pipe and valves that is changing the concept of valve design and resulting in greater efficiency and lower piping costs. On the Coast, in our Oakland laboratories, a new lubricant called Hypermatic has been developed. It is both expandable and compressible, and under pressure stores its own energy to replace itself as it is used up in a valve lubrication system.

One of a series of informal reports on the operations and growth of the  
**ROCKWELL MANUFACTURING COMPANY**  
PITTSBURGH 8, PA.

for its customers, suppliers, employees, stockholders and friends.



## Pooled Votes

Harvard study concludes that cumulative voting gives minorities protection without seriously threatening management.

Minority stockholders finally have wedged a foot in the door at Curtis Publishing Co. For the first time, and in spite of management's majority of something over 2-million shares, the minority interests have a seat on the company's board of directors.

They achieved it by cumulative voting of their 650,000 shares.

• **It's an Old Idea**—Cumulative voting is an old idea that has been making slow but fairly steady progress through the years. The system has advantages and disadvantages. Here's how it works:

Each shareholder is entitled to a package of votes equal to the number of shares he holds multiplied by the number of directors to be elected. He can either cast all these votes for one director, or split them up among any number he chooses.

What it really boils down to is proportional representation for corporations. By using it, minorities can pool their accumulated votes, cast them in such a way as to keep a management from making a clean sweep of the directorships. Sometimes, if they hold a good poker hand, the minority shareholders can do even better.

• **Minorities Gang Up**—Curtis Publishing Co. is an example of how cumulative voting works in practice. Walter R. Reitz, vice-president of the Quaker State Oil Refining Corp., was nominated by the minority for one of the seven directorships. The issue at this year's annual meeting was payment of a common stock dividend. There had been none for 18 years.

Reitz had 650,698 shares behind him. Under cumulative voting that amounted to 4,553,886 votes. Management had 19,931,736. The Reitz forces decided to play it safe, so they voted all 4,553,886 for one man. That was enough to beat Robert Gibbon, Curtis secretary. He got only 2,846,778 votes. The rest of the management slate won, each with 2,847,493.

If the minority had tried to elect two directors by splitting the votes, each would have got 2,276,943—not enough to win. Hence no representation.

But management had some chips left. By distributing its votes so that all its men got over 2.6-million votes, it was sure of electing at least six directors.

• **Book of Rules**—How did the management know? The whole question of cumulative voting has to be watched



THE DAILY NEWS

# SPOT MOVIE COMMERCIALS OUTSCORE ALL OTHER MAJOR MEDIA!

The Media Scoreboard at right should open your eyes to the surprising hatful of advantages you get with Spot Movie Commercials. And here are a few more interesting facts:



| MEDIA SCOREBOARD                    |                      |    |                |               |       |               |   |
|-------------------------------------|----------------------|----|----------------|---------------|-------|---------------|---|
| ADVANTAGES                          | SPOT<br>MOVIE<br>ADS | TV | NEWS-<br>PAPER | MAGA-<br>ZINE | RADIO | BILL<br>BOARD |   |
| Printed Word                        | X                    |    |                |               |       |               |   |
| Illustration                        | X                    | X  |                |               |       |               |   |
| Motion                              | X                    |    | X              |               |       |               |   |
| Color                               | X                    |    | X              |               |       |               |   |
| Spoken Word                         | X                    | X  |                | X             |       |               | X |
| Music                               | X                    |    |                |               |       |               | X |
| Demonstration                       | X                    | X  |                | X             |       |               |   |
| Full Dramatization                  | X                    | X  |                |               |       |               | X |
| Commanding Size                     | X                    | X  |                |               |       |               |   |
| Immediacy                           | X                    | X  |                |               | X     |               |   |
| 100% Readership                     | X                    |    |                |               |       |               |   |
| Complete Audience Attention         | X                    | X  |                |               |       |               |   |
| Available at Home                   | X                    |    |                |               |       | X             |   |
| Audience Selection by Neighborhoods | X                    | X  |                |               |       | X             |   |
| Audience Selection by Buying Power  | X                    | X  | X              | X             | X     |               |   |
| Average Cost Per Actual Reader      | \$ .004              | ?  | ?              | ?             | ?     | X             |   |
| TOTAL                               | 13                   | 9  | 3              | 5             | 4     | 6             |   |

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closely. Pennsylvania, where Curtis is incorporated, is one of 21 states that require cumulative voting if a group of stockholders requests it. So a simple formula has been worked out showing how to cumulate your votes best.

It appears in a new Harvard Business School book, *Cumulative Voting for Directors*, by Prof. Charles M. Williams (\$3.00, 194 pp.). Williams gives the history, present status, pros and cons of cumulative voting. His conclusion: There's a lot to be said for the system.

According to Williams, cumulative voting in corporations is strictly an American invention. It caused a lot of debate in the 19th Century during state constitutional conventions. In 1870 Illinois incorporated it in its body of laws, the first to do so.

• **Revised Edition**—Business is a lot different from then, but cumulative voting is still an issue. Only 10 states have no laws about it; and, say lawyers, this means it can't be used because it would be open to judicial challenge. Courts have ruled it must be in the statutes. Seventeen states have laws letting firms adopt it if stockholders approve. The other 21 permit or require it under various conditions.

In the states where it is legal—including New York, New Jersey, and Delaware—the issue periodically comes up at annual meetings. The vociferous Gilbert brothers (BW—Mar. 4 '50, p22), self-appointed stockholder guardians, often raise the question. This year U. S. Steel Corp., American Telephone & Telegraph Co., American Tobacco Co., among others, were forced to vote such proposals down. But Lewis Gilbert was able to get over 1-million votes for his resolution at the AT&T meeting.

• **Weapon for Stockholders**—Management men usually don't like the idea because it can be used as a weapon by selfish, disgruntled groups of stockholders. But the chances are slim that cumulative voting could upset big or even medium-size corporations.

Management can do a lot to beat its effect. Curtis Publishing Co., for instance, by majority vote cut the number of directors from 15-to-7 just before voting started. This cuts the chances of pooling minority votes effectively.

• **Stagger System**—Another method that's used is voting for directors by classes, electing three one year, three the next, and so on. Management can then make the minorities scrounge for a lot more proxies than they usually can get.

Finally, there's nothing to stop a majority of directors from removing a minority member once he's elected.

• **Few Fears**—As a result, management men haven't too much to fear from cumulative voting. Because of this, Williams thinks it would be wise to adopt the system generally.



*I thought A MATURED BOND was a Golden Wedding  
... until I got the facts from Norton*

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A *matured bond* is also the union between cement and brick, developed by high heat in such refractory applications as kilns, industrial furnaces, and water gas generators.

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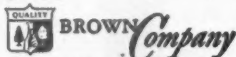
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TOP BRASS of Brown-Forman Distillers take the stage as amateur actors. It helps in . . .

## Putting Drama in Sales Meetings

With a professional actor to help them, Brown-Forman executives put on a skit that teaches company history to salesmen.

The production in the picture above didn't turn out to be another "Oklahoma!" but the audience, by all reports, loved it.

It was a captive audience of 44 top Brown-Forman sales representatives from the Central and Western states, in Louisville, Ky., for a regional sales meeting. But instead of listening to speeches they watched a stage show with the company officers as performers. A hired professional threw prearranged queries, company executives answered them without notes.

• **Dissatisfied** — Brown-Forman executives have been convinced for a long time that sales conferences don't get enough information across. They figure companies spend big hunks of money for meetings; few know whether they do any good.

B-F's first attempt to jazz up their meetings was in 1948. Richard Beckhard, an ex-Broadway stage manager ("The Male Animal," "Another Part of the Forest") was called in. He had set himself up in business as a conference consultant. That year he hired Sidney Blackmer to act out a role that put across some of management's ideas.

Beckhard is now in business in a big way. Last November he organized the Conference Counselors, hired a staff trained in communications. According to him, it's no gimmick. He works closely with the National Laboratory for Group Development, a National Education Association organization; consults

with the Research Center for Group Dynamics at the University of Michigan; teaches a Theater in Industry course at the American Theater Wing in New York City.

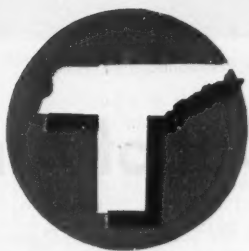
• **Group Dynamics** — "We use theater staging techniques, then apply them to what a company or organization wants to put over," says Beckhard. "It's all based on group dynamics—which has made big strides in the last few years because of armed forces studies during World War II."

One trick is role-playing. That's widely used in industry now for training supervisors in human relations (BW—Apr. 9 '49, p96). In role-playing, the supervisors act out a tough situation in which they might find themselves; thus work out the best way to handle the stickler. The B-F playlet is just a twist on this method.

To Beckhard it seemed the only way to do what management wanted: Give their salesmen a stiff dose of company history.

On the third day of the meeting, the salesmen were broken up into groups of six. That's the maximum, say psychologists, that insures participation by everybody. Home office management waited until each group had thrashed out a problem. Then they acted as critics while spokesmen for each group gave the answers. No one knew whose ideas were whose so even the most reluctant felt free to express an opinion.





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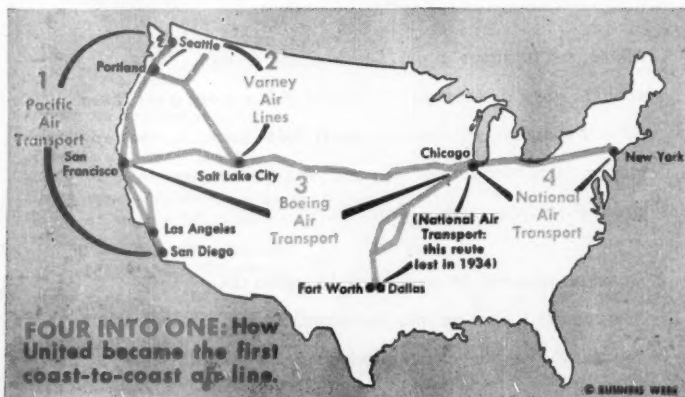
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# TRANSPORTATION



In 1927 the Boeing 40 mail-passenger plane, powered by the new Wasp air-cooled engine, revolutionized air transport.

## Making a Big Business—Out of Air



One day late in 1926, a 27-year-old junior officer in a San Francisco bank loaned \$5,000 to an outfit called Pacific Air Transport—a new company in a new industry. His boss was not happy when he heard about it. "You'd better stick close to those fellows until we get the money back," the boss said.

William A. Patterson did stick close—so close that less than three years later he quit the bank to go to work for Boeing Air Transport. Boeing had absorbed PAT by then. Five years later, after BAT, PAT, and two other airlines had merged into United Air Lines, Patterson was stepped up to president of the new corporation.

• "High Horizons"—This week Patterson's United—its wings full grown—



**BEFORE:** The first coast-to-coast fare-paying air travelers flew in small boxlike cabins of Boeing 40's. In 1930 United added stewardesses.



**AFTER:** Four-engine planes, such as United's Stratocruiser, plus hostesses in modern dress, have made the airlines a mass transportation agency.

was looking forward to the most prosperous year in its history. And its history parallels the history of commercial air transportation in the U.S. That's enough history to fill a book. And this week McGraw-Hill Book Co. has announced publication of "High Horizons"—the United story.

• **Looking Back**—The story of commercial airlines in the U.S. starts in 1926. Before then the only "commercial" flyers were the barnstormers who lured daring civilians up for 15-min. spins at \$5 apiece or who took the country folk's breath away with barrel rolls and loops at county fairs.

But the Post Office Dept. had been flying airmail along the "Main Line"—between New York and San Francisco—for some years. And in 1925 it decided to expand the service. The government didn't want to get into the flying business any deeper than it already was. So it asked private companies to bid on several routes that would

feed the Main Line. The first private operator dropped out after only two years. The second—Varney Air Lines, which flew from Elko, Nev., via Boise, Idaho, to Pasco, Wash.—was one of the four companies that later became United Air Lines.

• **Post Office Moves Out**—A year later, the Post Office Dept. decided to get out of the business altogether. So it split the Main Line up into two segments and asked for bids from private companies. The western leg—from Chicago to San Francisco—was won by Boeing Air Transport. The eastern leg—from Chicago to New York—went to National Air Transport, another of United's predecessor companies.

Boeing Air Transport was a subsidiary of Boeing Airplane Co., which had been set up in July, 1916, by William Boeing. For ten years Boeing Airplane Co. had prospered making and selling planes—mostly to the government. In 1926, with private companies

already flying airmail feeder routes, Boeing and his associates decided to cut themselves in. Even if it didn't make much money by itself, an airmail route would provide a new market for the company's planes. That was when they bid on, and won, the Chicago-San Francisco leg of the Main Line. They set up a new corporation—Boeing Air Transport—to operate it.

The line made money from the start. One big reason: Most other lines were weighted down with heavy water-cooled engines, but Boeing designed his mail plane around a relatively new type of engine—the air-cooled Wasp, made by Pratt & Whitney, of Hartford, Conn.

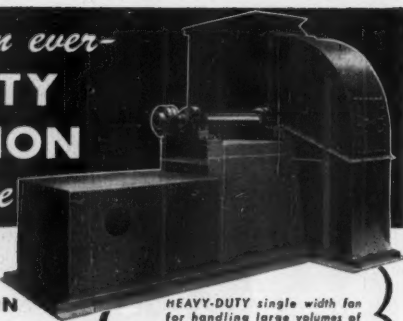
• **Merger**—The next step came in February, 1929. Boeing and Frederick Rentschler, of Pratt & Whitney, set up a new holding company—United Aircraft & Transport Corp. Its holdings included Boeing Air Transport and Pacific Air Transport (bought by Boeing a year earlier), Boeing Aircraft Co.,

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and Pratt & Whitney. Within a few months Hamilton Propeller Co., Stearman Aircraft Co., and Sikorsky Airplane Works were added. Boeing became chairman of the board, Rentschler president. Chance M. Vought, whose plane factory Boeing had bought just before the big merger, was one vice-president. Philip C. Johnson, one of Boeing's top men, was another.

And just two months after United A&T was set up, Johnson persuaded William A. Patterson to quit his San Francisco bank job and come to Seattle as his assistant.

Patterson had picked a good time for the change. The airline interests of the new company were expanding rapidly, and competition was beginning to rear its head. National Air Transport had started service on the feeder airmail route from Chicago via Kansas City to Dallas in May, 1926. Eleven months later it won the New York-Chicago leg of the Main Line, connecting with Boeing Air Transport at Chicago.

• **Enter Passengers**—Both lines were primarily interested in carrying mail. But Boeing also did its best to boost its passenger business, while National looked on passengers as a nuisance, to be carried only if there was enough room beside, or on top of, the mailbags. Early in 1929, BAT started flying trimotor Boeing 80-A's with enclosed cabins for 14 passengers, between San Francisco and Chicago. But if they wanted to go on to New York, the passengers had to transfer to NAT's old open-cockpit planes. And these planes could carry only one or two passengers at a time.

Rentschler soon saw that, if he was ever to build passenger travel on his line, he would have to do something about that. He was convinced, too, that the Post Office had been wrong to split the Main Line at Chicago just because the railroads had always handled transcontinental business that way. So early in 1930 he invited NAT's directors to a conference to work out a merger.

• **Merger by Proxy**—The NAT brass turned him down cold. So Rentschler went directly to the stockholders. And after a violent proxy battle, spiced with legal maneuvers, BAT won control. On Apr. 23, 1930, Rentschler was elected president and chairman of NAT. The first transcontinental airline under one management was a reality.

Two months later United bought Varney Air Lines, which had built up a network of lines in Boeing's home territory, the northwest. This completed the basic structure of what is now United Air Lines.

• **Patterson Takes Over**—Meanwhile Patterson had been gradually growing in importance within the United organization. Officially he was still John-



**"... the whole philosophy of the airline business continued to be oriented around mail, not passengers ..."**

TRANSPORTATION starts on p. 138

son's assistant. But Johnson, far more interested in building and selling planes than in running them, had turned over most of the airline operations to Patterson.

In mid-1931 United Aircraft & Transport set up a subsidiary, United Air Lines, Inc., with headquarters in Chicago, to coordinate its four airline properties. Johnson was named president, but he still had little interest in the airline side of the business. So Patterson became vice-president of the new subsidiary and president of each of the operating airlines—NAT, BAT, PAT, and Varney.

• **Passengers vs. Mail**—Passenger business continued to expand steadily over the next few years. United's gross revenues from passengers jumped from 4% in 1930 to 41% in 1933. Mail revenue dropped comparably—from 91% in 1930 to 54% in 1933. But mail still supplied the bulk of the revenue, even more for the other airlines than for United. And, more important, the whole philosophy of the airline business still centered on mail, not passengers.

• **The Big Blow**—Then the roof fell in. The new Democratic Administration in Washington charged that the existing airmail contracts had been obtained through collusion and conspiracy with the preceding Administration. It summarily canceled them. Then started the ill-fated experiment: The Army Air Force was to fly the mail. In less than two months there had been so many crashes and so many pilots killed that the White House gave the airmail back to the commercial operators on a temporary basis pending new legislation—but with two limitations:

(1) No former airmail carrier could bid on the new contracts;

(2) No airline executive who had been directly involved in the "collusion" could participate in any airmail contract for the next five years.

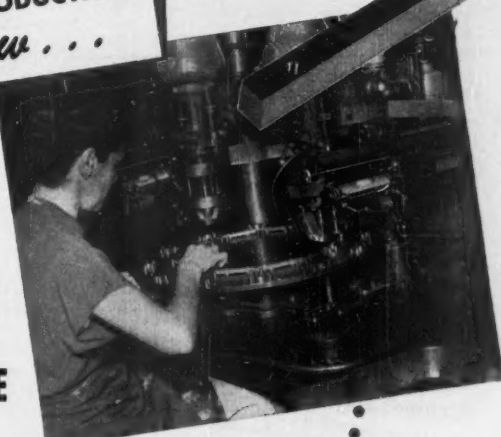
These strictures had a vital effect on United. The four operating airlines had held airmail contracts, but the newly formed holding company—United Air Lines, Inc.—had not. So the four—NAT, BAT, PAT, and Varney—were officially dissolved, and United became the operating company.

Johnson, as president of United, had been directly involved in the earlier negotiations. But Patterson hadn't. So Johnson had to quit as president. And on Apr. 13, 1934, Patterson moved up

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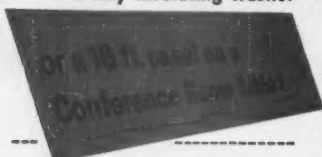


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"... the air traveler was still the adventurous exception..."

TRANSPORTATION starts on p. 138

to the position that he's held ever since.

• **Splitup**—United was still a subsidiary of United Aircraft & Transport—but not for long. The Air Mail Act of 1934, passed two months later, outlawed any financial or corporate connection between airlines and manufacturing companies. That was the death knell for United Aircraft & Transport. Within a month it was split up into three companies—United Aircraft Corp., which took over the eastern manufacturing properties including Pratt & Whitney, Sikorsky, Chance Vought, and Hamilton Standard; Boeing Airplane Co., which got the Seattle and Wichita manufacturing properties; and United Air Lines. Patterson was on his own.

• **A Blessing**—At the time, the airmail cancellations seemed like almost a death blow to the airlines. But they proved a blessing in disguise. They forced the airmail-minded airline executives to turn their attention to passengers. Even after the new mail contracts were awarded, the new airmail rates were so low that an airline flying mail alone just wasn't able to keep itself out of the red.

• **Two Factors**—United went all out to boost passenger traffic; so did its competitors. And this bitter competition for business, with the improvements that it generated, is one of the two major factors that have succeeded in making air transportation mass transportation.

The other major factor was the war. In 1940 the best airline plane was the two-engine, 21-passenger Douglas DC-3. Storms or fog kept the planes on the ground. And the air traveler was still the adventurous exception; most people still went by rail.

But the war produced big, four-engine planes that could fly almost anywhere in almost any kind of weather. Thousands of people flew during the war who had never flown before. Result: The airlines went into the war a little business; they came out of it a big business. United's passenger traffic in 1946 was almost four times that of 1941, the last prewar year.

• **Postwar Problems**—But the postwar period brought problems, too—such as the question of overseas flying. More than a dozen airlines flew overseas routes during the war, under contract to the Army or Navy. After the war most of them applied for routes to Europe, to Asia, to South America. When Pan American's Juan Trippe

came up with the idea of a "community company"—a single U.S. flag overseas carrier to be owned jointly by all the domestic airlines—they all fought him bitterly (BW—Sep. 23 '50, p. 38).

All, that is, except United. Patterson agreed with Trippe from the start. He knew that every time U.S. planes were granted rights to land on foreign soil, the U.S. would have to grant the foreign nations reciprocal landing rights here. And he figured that if the U.S. airlines had to compete with each other, as well as with the government-subsidized foreign lines, it would ruin them.

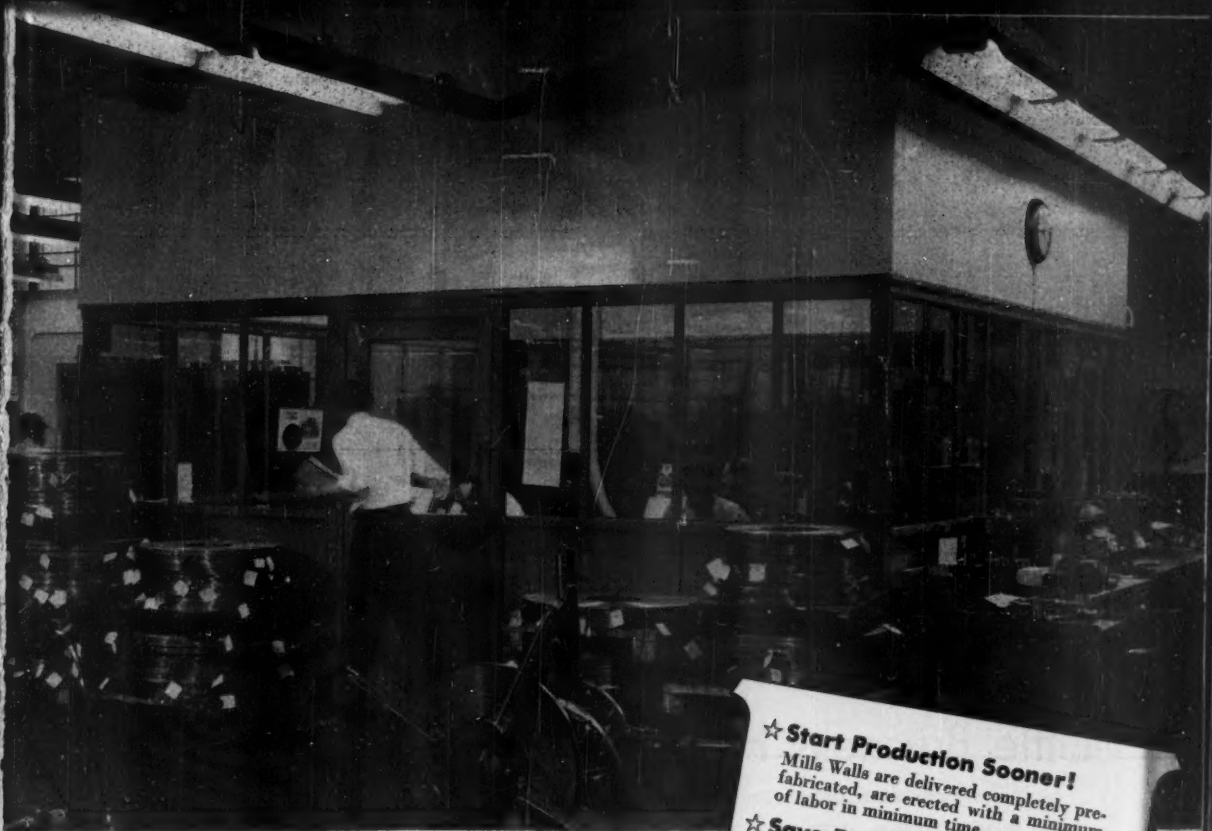
The community company idea was beaten. But Patterson still thinks that if the government were to drop subsidy payments to overseas airlines the idea would become popular almost overnight.

• **Flying Cut-Rate**—Another point on which Patterson is at odds with most other airline executives is the question of fares. More and more airlines are offering two-class service—first-class at regular fares and air coach travel at reduced fares. Advocates of air coach insist that it adds revenue without cutting into first-class travel. Patterson disagrees. About 40% of the air coach passengers, he says, would have bought first-class air travel if the coach had not been available.

Nevertheless, United is in the air coach business between Los Angeles and Seattle; competition from local nonscheduled lines offering coach fares forced Patterson's hand. And competition from its two big rivals—American and TWA—may eventually induce United to offer coach travel on its transcontinental routes, too.

• **Safety and Service**—But Patterson will never attempt to compete with the nonscheduled on coast-to-coast business. "It's a question of what kind of airplane service the customer wants," he says. "There are two different ways of operating an airline. One is our way, which we learned after many years of experience; the other is just to fly an airplane between two points." The difference between "our way" and the other way, Patterson feels, consists chiefly of three factors: safety, dependability, and service. "The American is always in a hurry. He'll take the fastest way, other things being equal. Fares are about equal now. Equal safety and dependability are the things we still must sell."

But on the question of service Patterson isn't interested in equality. He wants it to be far better than that. From the public's point of view, he says, the important thing is "the attitude and sincerity of the employees with whom the public comes in contact. Because, after all, the employees and the service are the airline, as far as the public is concerned."



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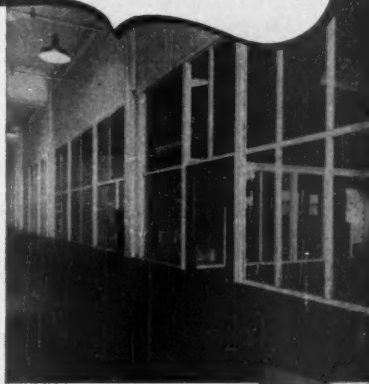
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# MARKETING

## The Small Merchant's Share: 1939 vs. 1948

| Unincorporated retail firms<br>in these categories... | ...had this percentage<br>of the stores... |       | ...and did this<br>percentage of<br>the business... |       |
|---|--|-------|---|-------|
|   | 1939                                       | 1948  | 1939  | 1948  |
| Food  | 89.7%                                      | 92.1% | 61.8%   | 60.7% |
| Eating and drinking                                   | 94.8                                       | 94.1  | 78.0  | 80.0  |
| General merchandise                                   | 71.8                                       | 70.2  | 11.4  | 10.5  |
| Apparel   | 74.9                                       | 76.9  | 41.9  | 43.2  |
| Furniture, furnishings, appliances                    | 72.5                                       | 79.2  | 43.0  | 52.8  |
| Household appliances                                  | 57.3                                       | 74.5  | 39.0  | 57.2  |
| Automotive  | 75.3                                       | 75.0  | 47.8  | 45.4  |
| Tires, batteries, accessories                         | 72.6                                       | 77.1  | 41.0  | 51.5  |
| Gasoline service stations                             | 94.2                                       | 95.4  | 84.7  | 87.8  |
| Lumber, building materials<br>hardware                | 72.8                                       | 76.1  | 46.3  | 52.2  |
| Drugs   | 83.7                                       | 84.8  | 61.0  | 65.3  |
| Jewelry   | 84.4                                       | 85.0  | 53.0  | 55.4  |
| ALL RETAIL  | 87.4                                       | 87.8  | 51.7  | 52.3  |

## Little Business Holds Its Own

The individual proprietor wasn't submerged in the tide of big business. New areas, new markets, higher incomes, mobilization helped him. He's better off than he was 10 years ago.

You can't just label it "the age of bigness" and let it go at that. True, the past 10 years have brought continued growth of bigness—big government and big business alike. But the small man has not only survived this gigantism; he has even been able to improve his lot in the face of it.

The poor, for example, instead of getting poorer over the past decade, have actually got richer (BW—Jun. 2 '51, p38). And now it appears that the small merchant—the man voted most likely to fail back in the early 1930's—is also doing very nicely. If anything, he's a little better off than he was 10 or 12 years ago (table, above).

• **Census Baedeker**—The clue to what's happening to the small merchant lies in a summary of the 1948 Census of Business just published by the Bureau of the Census. Entitled "Legal Form of Organization," it shows by kind of business how individual proprietorships, partnerships, corporations, and other forms of retailing businesses made out since the last business census in 1939. Here's the over-all picture:

The number of stores owned by unincorporated businesses (partnerships and individual proprietorships) in 1948

came to 1,553,350, or 87.8% of the 1,769,540 retail stores in all. This was a fractional advance from 1939, when unincorporated businesses accounted for 1,547,034 stores, or 87.4% of the grand total of 1,770,355. Stores owned by corporations stayed about the same—210,570 in 1939, 210,608 in 1948.

• **Unincorporated Stores Get More**—The share of the dollar volume going to unincorporated business has also risen a shade. Sales of the unincorporated stores came to \$68.2-billion in 1948, or 52.3% of the \$130.5-billion retail sales volume for the U.S. In 1939 their \$21.7-billion sales accounted for 51.7% of the \$42-billion total. The business done by the corporate retailers meanwhile climbed from \$19.8-billion to \$61.2-billion.

Average sales of unincorporated stores in relation to corporate stores stayed just about where they were 10 years before. In 1948 the unincorporated store averaged \$43,928 in sales, about 15% of the corporate store's average (\$290,603). In 1939 it also did 15%—\$14,042 as against \$94,079 for the corporate store.

In short, the small retailer has been holding his own against the biggies in merchandising. Further proof can be

found in the relationship of chains vs. independents. Here again, reports the Commerce Dept., there has been small change over the past decade or so. Preliminary data show that, if anything, the independents gained slightly on the chains between 1939 and 1948.

• **Decade of Expansion**—What lies behind this unexpectedly favorable showing by small retailers?

It's due in large part to the very nature of the decade. It was a period of expansion for all business. There were new areas to open up, new markets to tap. People's incomes were on the up. When that happens, price assumes less importance than service, friendliness, and the other things that the small merchant can offer. Thomas G. MacGowan, director of marketing at Firestone Tire & Rubber Co., sums it up thus: "Income has risen faster than prices as a whole, which puts the retailer in a very good position."

There was also the fact that the small merchant is the one who tends to gain most in a time of mobilization or war (BW—Jan. 6 '51, p63). Economist Julius Hirsch, chief consultant to the Office of Price Administration during World War II, puts it this way: "Big business must observe price ceilings, rationing, and other mandatory conditions conscientiously. Not only the clients enforce this, but also the employees. Small business can do much more—the more regulation, the greater the opportunity."

• **Little Capital Needed**—Furthermore, retailing is the last stronghold of the small entrepreneur. Paul H. Nystrom, Columbia University economist says, "Merchandising is the easiest field that the little man can get into with a small amount of capital." After the war, thousands of new merchants sprang up, many of them aided by loans under the G.I. Bill. In 1948 alone, for example, no less than 250,000 new stores were started. These new postwar enterprises—mainly unincorporated businesses—have made up for the dearth of the war years, when few new merchants set up shop.

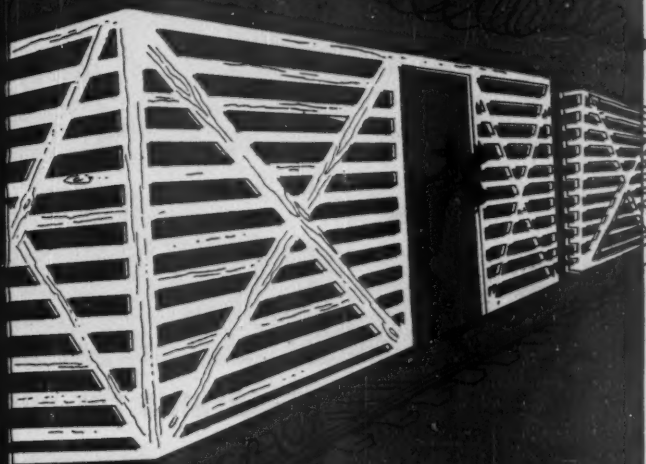
Note in particular the figures in the table on household appliance stores. This was a favorite field for the postwar newcomers. Between 1939 and 1948, the number of unincorporated appliance stores zoomed from 10,317 to 22,059, sales from about \$189-million to \$1.2-billion.

Auto accessory shops also got a big boost, thanks to the droves of newcomers. But there was another factor at work here: For the past decade the tire companies, with their elaborate merchandising programs, have done a great deal to encourage independents to enter the field and stay in.

• **Fair Trade Helped**—Fair trade has also been another major prop for the



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out of  
**WOOD!**



ALL INDUSTRY uses wood . . . and when wood is PENTA-PROTECTED it serves industry better!

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Your wood trader and lumber dealer are fully prepared to help you get the most out of your wood and wood products. For detailed information, write Dow, Dept. P-E-51.

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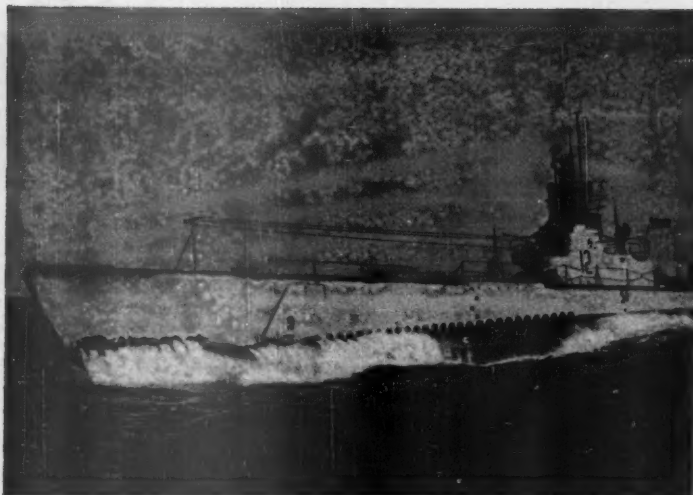
LEADING TELEPHONE, Light and Power Companies have switched to PENTA—a chemical preservative of proved effectiveness and constant uniformity.

Write us about **Penta\*** —the clean wood preservative

HOMEOWNERS can now protect their investment by using wood preservatives containing PENTA, available in handy one-gallon cans, easy and economical to apply. Available on request, booklet "Before You Build or Buy."

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Official U.S. Navy Photograph

## HOW THEY KEEP POWER BEHIND THE PUNCH

Modern submarines *think* and *fight* through a complex electrical wiring system.

To keep under-sea "nerves" tuned to peak efficiency, the Navy base at Portsmouth, N. H. carries out a continuing program for the development and manufacture of new and more reliable electrical assemblies.

Under a normal refitting schedule, Portsmouth's production facilities can keep pace with demand. But when output had to be boosted fast,

the Navy turned to outside sources of supply — via Graybar.

First, Graybar found suppliers who were competent to make the many different types of components required. Then, Graybar combined the skills of several of its other suppliers to make up and deliver the complete assemblies.

As a result, the Navy met its reconversion schedule and Graybar *once again* proved its ability to deliver the goods.

● If you, too, need a source for component parts or finished assemblies, you'll find it helpful to contact your local Graybar Representative. His wide knowledge of electrical products plus intimate Graybar relationships with more than 200 of the nation's leading electrical manufacturers can almost always provide a practical solution to procurement problems.

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*avoid electrical delays—  
plan ahead.*

*via  
Graybar*

IN OVER 100 PRINCIPAL CITIES

small independent merchant during the past decade. This has been particularly true in the drug and jewelry businesses. Under the fair trade umbrella, the small merchant has been protected from price cutting and provided with a healthy markup.

The end of fair trade on a national scale now throws this advantage into reverse. How much it will hurt the small retailer remains to be seen. But it's sure to leave its mark.

• **And Rising Incomes**—But other favorable currents still run strong for the small merchant. This is still an era of rising incomes. Mobilization, according to some experts, will again work to his favor as it did last time. New industrial areas are springing up under the pressure of mobilization; new mass housing developments are still going up. The small man has an advantage here; he can and does move in faster than the more cumbersome chains. And there is always the presence of price controls.

The test of the small merchant, however, will probably come after 1953—when and if we reach the butter-plus-guns economy now forecast. Then we will find how well he can do in a highly competitive economy.

## MARKETING BRIEFS

The Horvitz brothers, Ohio newspaper owners, are having more antitrust trouble. Justice Dept. charges that their Mansfield News-Journal discriminates against advertisers that also use the local radio station. This is similar to the case against the brothers' Lorain Journal (BW—May 12 '51, p48). The brothers lost that case in a lower court, and they are now appealing it to the Supreme Court.

• Old-time salesmanship is being used by Hotpoint to sell its refrigerators during June. It's sponsoring a \$50,000 dealer contest. Top prizes: a Cadillac and two Buicks, plus a three-day trip.

• Gasoline-war signs have been restricted to 4 in. x 6 in. in a law signed by Gov. Elbert N. Carvel of Delaware. The curb is similar to that already in force in Wilmington (BW—May 19 '51, p108). Philadelphia gas retailers are fighting another such ordinance in the courts.

• Earnings were down at Federated Department Stores for the first quarter, despite the fact that sales were up 14% over the same period last year. Net income was \$1.7-million as against \$2.5-million. The chain says margins dropped and operating expenses rose.



## BUILT TO **BOUNCE** 100 TONS

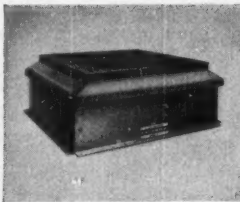
When you're in the foundry business, some of your orders may be jumbo size . . . like many components of a locomotive . . . the hull of an army tank . . . the frame of a giant automobile press. The part to be cast and its encasing "flask" of sand may weigh 100 tons or more.

Shaking the sand out of such flasks and knocking out the cores, is a job calling for vibration—concentrated where it does the most good, localized so it cannot do harm. That's why Hewitt-Robins Floatex® Shakeouts are standard equipment in practically every important foundry in America.

The Floatex Shakeout is a Hewitt-

Robins "first" . . . one of a long list of basic improvements in the handling and processing of solid and fluid bulk materials. Floatex was the first foundry shakeout to employ the full floating principle that keeps vibrating action where it belongs: on the live deck. *Floatex shakes the flask—not the foundry* . . . no vibration can escape to weaken buildings, collapse unpoured molds, jangle workers' nerves.

If you have bulk materials to convey, size, screen, sort, feed, grade, purify, de-water or otherwise process, it will pay you to bring your problems to the people responsible for the most that is modern in materials handling today.



**HEWITT-ROBINS FLOATEX SHAKEOUTS** are literally unlimited in size. By combining these independently-driven basic units, each Shakeout is matched in capacity to the foundry work load.

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Executive Offices: 370 Lexington Avenue, New York 17, N. Y.

**HEWITT RUBBER DIVISION:** Belting, hose and other industrial rubber products

**ROBINS CONVEYORS DIVISION:** Conveying, screening, sizing, processing and dewatering machinery

**ROBINS ENGINEERS DIVISION:** Designing and engineering of materials handling systems

**HEWITT RESTFOAM DIVISION:** Restfoam® mattresses, pillows and comfort-cushioning

Hewitt-Robins is participating in the management and financing of Kentucky Synthetic Rubber Corporation



ALERT LISTENER Kaiser of Kaiser's Kaffeegeschäft tours new supermarket with Grand Union's sales manager Roosov (right).

## German Retailers Visit U.S. Food Markets

Merchants from the land of the warme wurst are touring the U.S. to see how the land of the hot dog markets its food. Some 15 West German food retailers this week were en route from Philadelphia to Cincinnati in a seven-week cross-country trek that will take them to leading cities from coast to coast. It's a Point 4 project sponsored by the Economic Cooperation Administration.

The first stop was New York. Here the West Germans moved at a brisk clip through Grand Union's newest supermarket (pictures) and the outlets of Gristede, Safeway, Bohack, and D'Agostino food chains. After five days, they headed for Boston, Washington, and points west.

• **Job for ECA**—It all started when John A. Logan, president of the National Assn. of Food Chains, was in Paris in June, 1950, at the International Congress of Food Distribution. The

Germans couldn't get to the congress, so Logan decided to go to Germany himself. There the food retailers all had the same story: "If we could only get to the U.S. and see how you do it." Logan figured, "Here's where ECA comes in." He believes this is the first ECA retail mission of any kind.

The Germans were split up into small groups, the better to see and understand what makes the big U.S. supermarkets tick.

Armed with an interpreter, they went behind and under scenes as well as on the shopping floor.

• **Merchandising Marvels**—At Grand Union, they marveled at the ice-making machine that flakes off ice to keep vegetables fresh on the counter. From the basement they peered up the conveyor that hauls foods—all weighed, packaged, and price-marked—up to the tilted shelves of the Food-O-Mat. They dove into the frozen food chests, laid

bets on the weight of meat cuts in the chilly air of the Meateria, where great hulks of beef are converted into pre-packaged steaks.

• **Things Are Different**—It wasn't like home, they agreed. Gunther Latscha, chairman of the German delegation, said there were few self-service stores in Germany. He runs Latscha Co., in Frankfurt, which operates 165 stores, two warehouses. In his country, he said, 89% of the food operations are independents; 54% were cooperatives, 54% chains. He doubted that Germany would be able to go in for self-service in a big way soon. It would entail too big an initial outlay to make store buildings suitable.

It is quite possible to make a profit in food merchandising in Germany today, Latscha reported—but not after taxes. Food prices are high; people spend half their income on food; U.S. families spend about a third.





**BEHIND SCENES** Kaiser and fellow retailer Hans Schurmann (next left) see how tilted shelves are loaded.



**NEIN!** In basement Kaiser is bemused by preweighing, prepackaging, and prepricing. "But you don't have a kitchen, do you?"



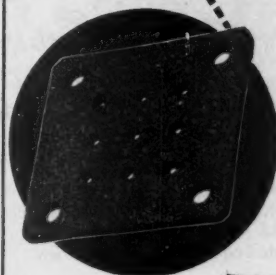
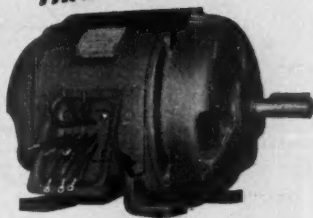
**CHAIRMAN** Gunther Latscha (center) admires Food-O-Mat. Prices interest him, too; in Germany coffee is \$3 a lb. At right is John Logan, who got ECA to sponsor the program.



**TURNABOUT:** While Business Week's camera photographs Kaiser, he takes a few quick shots with his own camera to show them back home how it's done in the U. S.

In making a better motor...

**IT'S THE LITTLE THINGS THAT COUNT, too!**



**RELIANCE**  
Precision-Built  
**MOTORS**

Here is one of the extras which proves that "All Motors are NOT Alike" —this synthetic rubber gasket...

- ★ Permanently indexes the motor leads
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PHYLLIS PHILIER  
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SUGGESTIONS  
*Dear Boss—*  
*Our "file wrestlers" and*  
*"drawer yankers" could*  
*handle a lot more work*  
*with precision-operating*  
**G/W Engineered**  
**GLOBEART STEEL FILES**  
*Can we "DO" something*  
*about it?*  
*Phyllis*

Obsolete, work-slowng equipment in your office can cause costly wastes, inflict the same business headaches as outdated equipment in the factory.

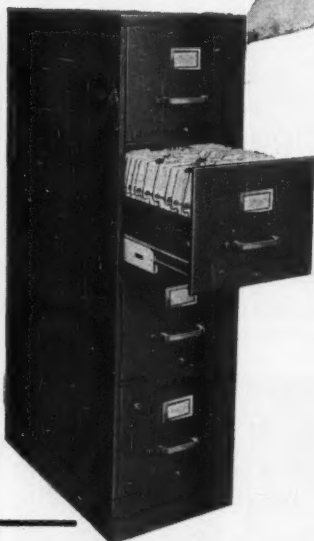
**CHECK THE PULSE** of your business—your files! Are they hampering fast, efficient work—with slow, awkward operation? Do they pile up little, countless delays to a big total of losses?

How much cheaper—faster, more profitable—to impeach the sluggards!—install modern file cabinets, with smooth-gliding drawers—with instant response to fingertip impulse!

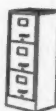
That is the famous G/W Engineered GlobeArt file action!

**THESE MASTER FILES** are both rugged and beautiful. They look and perform like the thoroughbreds they are. They say "good business!"—because they act and are good business equipment. Any drawer arrangements you want—to fit your business.

Let your dependable Globe-Wernicke dealer tell you or show you the Globe-Art story of thrifty quality; find him listed under "Office Equipment" in the classified phone book.



GlobeArt files are delivering smooth cabinet performance—not by years but by generations! Another of the G/W 4,000 aids to better and lower cost office service.



Engineering Specialists in  
Office Equipment, Systems  
and Visible Records

Cincinnati 12, Ohio

## Chained Doors

Supreme Court rules local ordinances restricting door-to-door selling—or banning it outright—are constitutional.

The theory that a salesman has a constitutional right to knock on any door was rudely shaken last week. The Supreme Court ruled that municipal councils have the right to regulate door-to-door selling or ban it outright if they want to. The right of freedom of speech and freedom of the press, it held, does not necessarily extend to the man who presses a doorbell and willy-nilly makes his sales pitch to the reluctant housewife.

In effect, the ruling seems to be in line with court thinking in other recent cases. The householder may not be a captive audience in his own home any more than the bus rider may be a captive audience for broadcast radio commercials (BW—Jun. 9 '51, p121).

• **Effect on Selling**—Just how deep this verdict will dig into the merchandising structure is still a matter of guesswork. Estimates on the number of U.S. communities that now have such bans run from 300 to 1,100.

Neither are there precise figures on how large a business is done by this method. Estimates on volume of door-to-door business range from \$1.4-billion worth of consumer goods annually up to \$6-billion—if you count in insurance.

• **Hits Home**—However big the volume, it's enough to give some magazine publishers a chill. For them, the case on which the Supreme Court ruled came close to home. It was brought by Jack H. Breard, regional representative of Keystone Readers Service, Inc., Bryn Mawr, Pa. Keystone is one of the big agencies that handle direct sales of magazines.

Breard challenged the constitutionality of an ordinance in Alexandria, La., which banned door-to-door sales unless the salesman had the householder's permission to call. This type of ban is the so-called Green River ordinance, named for the Wyoming town that set it up some years ago. Five states' courts have upheld the validity of such ordinances; 11 have ruled them invalid.

• **No Illegal Restraint**—By a vote of six to three, the Supreme Court rejected Breard's argument. Such bans are not a violation of the freedom of speech or of the press, the majority held. They are not an illegal restraint on "the right to engage in one of the common occupations of life," but simply a limitation on one way that occupation may be carried out. At the same time, the court made it clear that there is no

legal restraint on a salesman who calls at the householder's invitation.

• **Vital Circulation**—You can understand magazine publishers' alarm by looking at the circulation figures cited in the court ruling—figures that are pretty much confirmed by industry findings. The court said that field solicitation of subscriptions regularly accounts for 50% to 60% of the total annual subscription circulation (as opposed to single copy sales) of nationally distributed magazines that submit verified circulation reports to the Audit Bureau of Circulation.

"It's too early to tell what this will do to us," some companies say. But one magazine publication spokesman says point blank, that "a Green River ordinance practically kills field selling in the area." Keystone itself reserved comment for the moment, but its lawyers are reportedly studying the possibility of asking for a rehearing.

• **Are Bans Necessary?**—What makes the trade's hackles rise is that it feels municipal bans aren't necessary; the industry says it can—and does—do a policing job itself. Industry spokesmen point to the Central Registry plan sponsored by the National Assn. of Magazine Publishers, the National Better Business Bureau, and local chambers of commerce. Under this plan, sales groups register with local chambers or with the police; salesmen's selling practices are checked. Since October, 1948, 12,259 sales groups have been registered. And 93.3% of the reports on group members have been favorable.

• **Fuller Brush Stand**—Outside the magazine trade, comments were cautious. A Fuller Brush official felt that the ruling wouldn't affect his company much. The firm has never challenged the validity of local regulations and has lived with them for years. Walter Dietz, president of Electrolux Corp., looked for little trouble as far as his own operation was concerned. He felt that the particular case was directed only at migrant salesmen and that it concerned the constitutionality of only Green River ordinances—not the many other types of bans that exist.

• **More Bans?**—One big question is whether the ruling will encourage other towns to set up similar bans. Communities haven't gone in heavily for local bans even in the states that have found them legal. Dietz and others claim that door-to-door sales tend to boost sales in the local stores and newsstands.

Whether or not communities set up restrictions, it seems clear that they have the authority to. The big qualification the Supreme Court made is that such restrictions may not discriminate. The test of how much a particular regulation will hurt will be how rigorously the community enforces it.

... pointed out  
opportunities we  
might otherwise  
have missed.

Says  
J. R. Fenstermaker  
about  
DODGE REPORTS



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DISTRIBUTORS — FABRICATORS  
Indianapolis, Indiana

"For 35 years Dodge has kept our selling organization on its toes. Dodge service has served as a check on our own sources of information and has pointed out the opportunities we might otherwise have missed. It gives us genuine pleasure to again renew our contract with you."

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DAILY Dodge Reports point out opportunities that might be missed without the services of the great Dodge news gathering organization. They cover all types of construction, tell you all you need to know about *what* is going to be built, *whom* to see and *when* to see them. Available for any area or combination of areas, from a single county to the entire 37 Eastern States.

Write for sample Dodge Reports  
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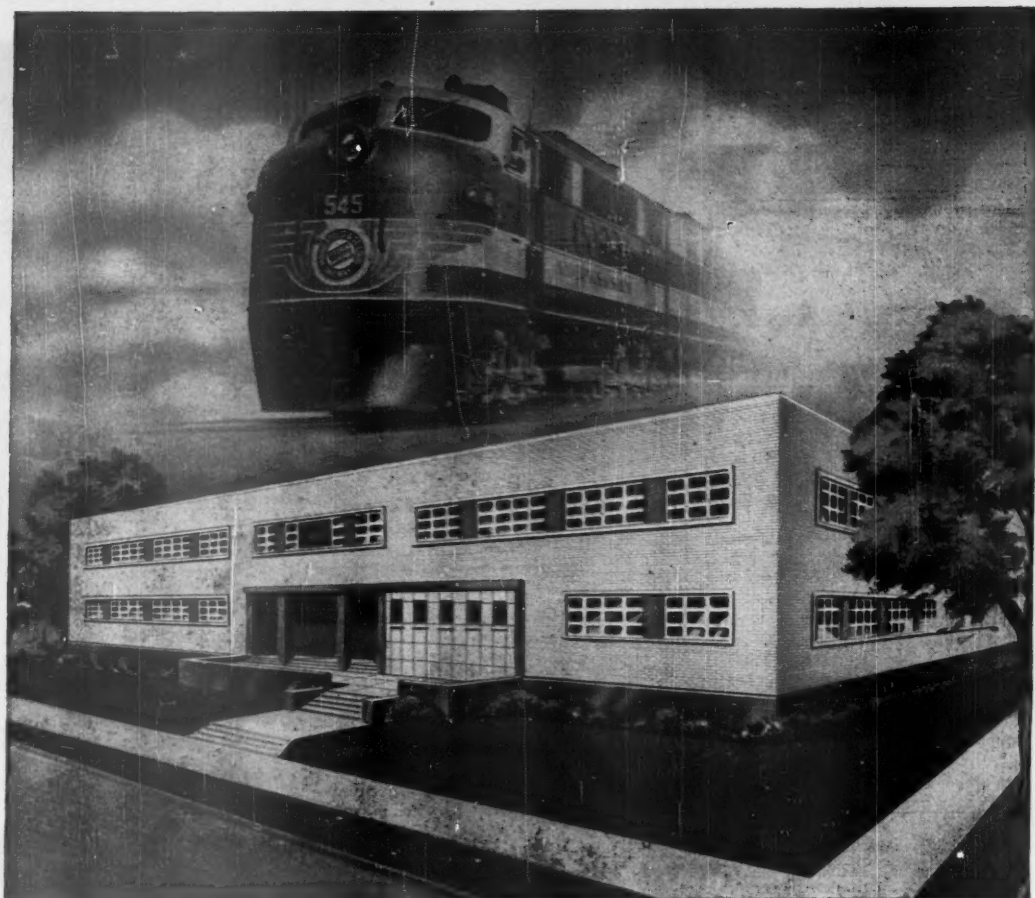
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## Modern Offices for a Modern Railway..... *the M. & St. L.*

### Read "MILEPOSTS on the PRAIRIE"

The Story of the Minneapolis & St. Louis Railway. A Great New Railroad Book by Frank P. Donovan, Jr. \$4.50. At Your Bookstore or Simmons-Boardman Publishing Corp., 30 Church Street, New York 7, N. Y.



GENERAL OFFICES of the Minneapolis & St. Louis Railway are now in its New Headquarters Building in Minneapolis, at 111 East Franklin Avenue.

Streamlined for efficiency, like the Fast Freight Service of the M. & St. L., this Modern Building stands as a monument to Progress of the Railway, of the City where it had its beginning

in 1871 and of the Great Midwest territory which it has served through the 80 Years.

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## The Minneapolis & St. Louis Railway

New Address: 111 East Franklin Avenue, Minneapolis 4, Minnesota • New Telephone Number: Main 7144



# FINANCE

## 1951 Utility Pattern:

Revenues up, earnings mostly down

|                               | January-April<br>Gross Revenues |          |        |  | January-April<br>Net Earnings |          |        |  | Net Earnings<br>% of Gross |       |
|-------------------------------|---------------------------------|----------|--------|--|-------------------------------|----------|--------|--|----------------------------|-------|
|                               | 1951                            | 1950     | Change |  | 1951                          | 1950     | Change |  | 1951                       | 1950  |
| Arkansas Power & Light        | \$ 9,462                        | \$ 8,273 | +14.4% |  | \$ 1,088                      | \$ 1,071 | +1.6%  |  | 11.5%                      | 12.9% |
| Boston Edison*                | 19,658                          | 17,924   | +9.7   |  | 2,387                         | 2,439    | -2.1   |  | 12.1                       | 13.6  |
| Carolina Power & Light        | 11,141                          | 10,618   | +4.9   |  | 1,917                         | 1,921    | -0.2   |  | 17.2                       | 18.1  |
| Cincinnati Gas & Electric*    | 22,811                          | 19,182   | +18.9  |  | 3,593                         | 3,558    | +1.0   |  | 15.8                       | 18.5  |
| Cleveland Elec. Illum.*       | 20,631                          | 18,445   | +11.9  |  | 3,380                         | 2,723    | +24.1  |  | 16.4                       | 14.8  |
| Commonwealth Edison*          | 77,532                          | 70,966   | +9.3   |  | 9,233                         | 8,426    | +9.6   |  | 11.9                       | 11.9  |
| Consolidated Edison of N. Y.* | 118,863                         | 109,975  | +8.1   |  | 16,295                        | 15,483   | +5.2   |  | 13.7                       | 14.1  |
| Cons. Gas Elec. Lt. & Power*  | 23,027                          | 21,881   | +5.2   |  | 3,258                         | 3,200    | +1.8   |  | 14.1                       | 14.6  |
| Consumer Power                | 48,279                          | 38,977   | +23.9  |  | 8,403                         | 7,776    | +8.1   |  | 17.4                       | 20.0  |
| Detroit Edison*               | 43,769                          | 38,473   | +13.8  |  | 4,637                         | 5,243    | -11.6  |  | 10.6                       | 13.6  |
| Georgia Power                 | 24,285                          | 24,642   | -1.4   |  | 2,791                         | 3,260    | -14.4  |  | 11.5                       | 13.2  |
| Houston Lighting & Power      | 11,446                          | 9,962    | +14.9  |  | 1,850                         | 1,979    | -6.5   |  | 16.2                       | 19.9  |
| Idaho Power*                  | 3,944                           | 3,594    | +9.7   |  | 724                           | 860      | -15.8  |  | 18.4                       | 23.9  |
| New England Electric*         | 27,204                          | 25,204   | +7.9   |  | 2,676                         | 3,291    | -18.7  |  | 9.8                        | 13.1  |
| Niagara Mohawk Power*         | 44,709                          | 38,709   | +15.5  |  | 6,007                         | 6,101    | -1.5   |  | 13.4                       | 15.8  |
| Ohio Edison                   | 32,874                          | 28,577   | +15.0  |  | 5,042                         | 4,923    | +2.4   |  | 15.3                       | 17.2  |
| Pennsylvania Power & Light    | 28,602                          | 25,863   | +10.6  |  | 4,384                         | 4,677    | -6.3   |  | 15.3                       | 18.1  |
| Philadelphia Electric*        | 44,531                          | 40,377   | +10.3  |  | 8,140                         | 8,561    | -4.9   |  | 18.3                       | 21.2  |
| Public Service of Colorado*   | 14,422                          | 12,629   | +14.2  |  | 2,461                         | 2,509    | -1.9   |  | 17.1                       | 19.9  |
| Southern California Edison*   | 28,579                          | 25,446   | +12.3  |  | 4,774                         | 5,162    | -7.5   |  | 16.7                       | 20.3  |
| Southern Co.                  | 46,403                          | 44,089   | +5.2   |  | 4,962                         | 5,326    | -6.8   |  | 10.7                       | 12.1  |
| Texas Power & Light           | 8,837                           | 8,123    | +8.8   |  | 1,384                         | 1,658    | -16.5  |  | 15.7                       | 20.4  |
| Toledo Edison*                | 7,711                           | 6,828    | +12.9  |  | 1,202                         | 1,368    | -12.1  |  | 15.6                       | 20.0  |
| Union Electric of Missouri*   | 22,108                          | 20,512   | +7.8   |  | 3,833                         | 4,215    | -9.1   |  | 17.3                       | 20.5  |
| Virginia Electric & Power     | 23,270                          | 20,684   | +12.5  |  | 3,814                         | 3,496    | +9.1   |  | 16.4                       | 16.9  |

NB All figures given are in thousands of dollars. \*Periods covered are January-March 1951, 1950.

© BUSINESS WEEK

## Electric Utility Earnings Drop

Though the industry may gross \$200-million more than in the first half of 1950, profits are expected to dip \$17-million.

First-half operating reports that electric utilities will be sending out to stockholders in a few weeks will carry lots of encouraging figures showing increases in power output and in revenues. But not many of them will show corresponding increases in earnings.

• **Costs Cut**—In the case of two out of three utilities, gains in gross aren't big enough so far this year to offset higher operating costs and higher tax rates. The effect on earnings shows up clearly in the sampling of the industry above.

Analysts of the electric power trade expect that January-June earnings will drop as much as 4%, or \$17-million, below their 1950 level—even though total revenues for the period may be as much as \$200-million greater. As they see it, while gross for the industry will very likely set a record at \$2.4-billion

(it was less than \$2.2-billion last year), earnings after charges aren't apt to exceed \$420-million (they totaled \$437-million in last year's first half).

• **Threat to Dividends**—That was the most common prediction that you heard at the 19th annual convention of the Edison Electric Institute in Denver last week. But some at the convention were even more pessimistic; they voiced the fear that unless the present trend takes a turn for the better some power producers by the third quarter may even find their earnings running somewhat below the rate of recent dividend payments.

There is more than pure pessimism behind that statement. Electric utilities traditionally have paid a generous dividend in relation to available earnings. Last year, for instance, they dis-

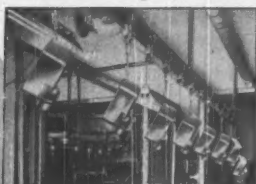
tributed to stockholders more than 75% of all net profits; the average paid out by industry generally was only 40% of earnings.

If present second-quarter operating estimates prove approximately true, it isn't likely that the industry will have more than \$25-million of its earnings left in the till after second-quarter dividend payments; it had \$72-million left over in March.

• **Tax Worries**—Right now the worst worry that the power companies have is taxes. It's estimated that their tax bill for the first half of this year will run in the neighborhood of \$575-million—about \$115-million greater than they paid out in the same period last year.

That means that electric utilities must set aside about 24¢ out of each \$1 of revenues for the tax gatherers instead of 1950's 21¢, 1949's 19¢, and the 9.6¢ needed back in 1929. It's not the excess profits tax that's to blame for

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this sizable bite. The new EPT law grants such regulated industries as railroads and utilities much more favorable treatment than they got under the similar tax during World War II (BW—Jan. 6 '51, p. 87).

The sharp hike in the utilities tax bill, instead, has been almost entirely due to the raises voted last year in the regular federal corporate income tax rates. The further increase in income tax rates that appears destined to be approved later this year by Congress is really going to hurt.

• **Expansion Costs**—High taxes hit the utility industry at an unfortunate time. Electric power companies are right in the middle of their most ambitious expansion program. They have spent \$8-billion on construction over the last five years, and the job is still far from finished. If they are to meet the estimated demand for electricity in 1953 utilities must spend an additional \$7-billion to expand their facilities.

• **New Money**—Since the war, the industry has been able to get about a third of the cash it has needed to finance this expansion from its depreciation account and retained earnings, the rest from the sale of new securities to investors. Now the industry is laying plans to secure about \$4.7-billion of its 1951-53 financing requirements through sales of new securities, including some \$3-billion from the disposal of new bond offerings, another \$700-million from the sale of new preferred shares, and about \$1-billion from new common stock offerings.

• **Dearer Money**—Electric utilities foresee no difficulty in finding a market for their bond offerings, but they do expect that their borrowings will cost them more than it has until recently. One company, Georgia Power, got an idea last week just how much more; its sale of \$20-million new first mortgage bonds involved a 3.44% annual net interest cost to the company. The same company disposed of \$15-million of similar bonds in April, 1950, at an interest cost of well under 3%.

Speaking before the convention at Denver last week, George D. Woods, chairman of the prominent investment banking house of First Boston Corp., predicted that from now on new preferred issues would need to offer a dividend return of 4.25% to 5% to attract buyers.

• **Higher Rates Needed**—Wood also warned the industry that it had not been getting a sufficient return on its investment recently, that it must seek higher rates without delay in order to facilitate the heavy sales of common stocks that are on its financing agenda.

According to Wood, from the standpoint of the stockholder, the electric power companies' rates for service "generally speaking are too low." While

many a user of electricity will rise up in wrath to dispute his claim, it would certainly seem to be borne out by the low rate of return the industry has received on its invested capital lately. Last year the return was only 4.95%, compared with the 5.7% return reported as recently as 1948. For the first half of this year, the return is estimated to be as low as 4.86%.

• **Moves to Raise**—Though the industry has made little attempt to increase rates so far this year, it appears that plenty of efforts are in the offing. Boston Edison Co. recently told the Massachusetts Public Utilities Commission that it might soon find it necessary, for the first time since 1918, to seek a general rate increase. Washington Water Power Co. is also expected, for the first time in 50 years, soon to ask the Washington and Idaho utility commissions for substantially higher rates. And Pittsburgh's West Penn Power has just found it necessary, for the first time in its history, to ask its regulatory bodies for permission to hike its rates.

## Municipal Bond Issue Will Finance Nylon Mill

Municipal revenue bonds always find a ready market at low yields because interest on them is tax-exempt. Now more and more cities are using them to finance projects that seem to have little connection with local government services (BW—Jun. 24 '50, p. 86). The latest, Elizabethton, a small city in Tennessee, will float an issue to back a textile plant for Textron, Inc., which will employ about 1,000 workers.

• **To Rent**—The city will build and equip a \$7.8-million nylon tricot mill, rent it to Textron for five years at \$1,560,000 a year. That will amortize the cost of the plant. After that, Textron has nine options of five years each, at a rental of \$35,000 a year.

Elizabethton will raise \$4-million from revenue bonds it has arranged to sell privately. The issue will be secured by a mortgage on the property. Like most revenue bond issues, it will have no claim against the credit of the city itself. Rentals from Textron will pay principal and interest on the bond issue and make up the rest of the \$7.8-million needed for the finished plant.

• **Others to Follow**—This isn't the first time a city has used the revenue bond to attract new industries. But it's probably one of the biggest and most complete deals of this kind to date. Other Tennessee cities are expected to follow Elizabethton's lead. A new state law just passed—the Industrial Building Revenue Bond Act of 1951—has removed all doubts as to the legality of the financing.



Walter S. Mack, Jr.

## Mack's Plans

**Former Pepsi-Cola boss wants to take over National Power & Light Co.—will turn it into a management company.**

Walter S. Mack, Jr., is back in the news for the first time since he resigned as chairman of Pepsi-Cola Co. last fall (BW—Sep.23'50,p98). This week Mack was waiting hopefully for a nod from the Securities & Exchange Commission. SEC is considering Mack's plan to have his investment company, Phoenix Industries Corp., buy stock control of National Power & Light Co., turn it into a management company.

• **Makes Sense**—This unusual deal would make sense for Mack. National P&L has practically no debts and \$2-million in Treasury bills. It has had to get out of the utility business. And it's listed on the New York Stock Exchange. Under the Holding Company Act, Electric Bond & Share Co., the present owner, has to get rid of National P&L. It has agreed to sell its 46½% stock interest to Mack's Phoenix Industries for about \$1-million. National P&L is itself a subholding company that has sold its subsidiaries.

If SEC gives Mack a green light, Phoenix Industries will offer to buy the other outstanding shares of National P&L for 45¢ a share—the same price it is giving Electric Bond & Share. It would ask stockholders to O.K.: (1) a change of name to National Phoenix Industries, Inc., (2) a change of corporate charter and bylaws that would permit the company to go into the management field.

This involved maneuver will give

Mack control of \$2-million for \$1-million—though, of course, he'll have to pay more if other old National P&L stockholders want out. And it will give him a Big Board listing without any delay or expense.

• **An Old Hand**—Mack is no stranger to Wall Street. It was through his old Phoenix Securities Corp., which specialized in reviving ailing businesses, that Mack happened to get interested in Pepsi-Cola. Phoenix Securities was dissolved after Mack turned all his considerable energies to selling Pepsi.

Mack's new Phoenix will seek control of companies that have good growth prospects "if provided with good management and working capital." It will be particularly interested in consumer products.

If National Phoenix is formed, Phoenix Industries will turn over to it the management of Nedick's, Inc., a chain of quick-lunch counters (BW—Jul.1'50,p48) that sells its own orange drink. Phoenix has just bought stock control of Nedick's.

Mack, a soft-drink connoisseur, feels that Nedick's orange drink could be sold all over North and South America. He points out that it now has only six franchised bottlers.

• **The Stockholders**—Besides Mack, Phoenix Industries has 23 other stockholders. Among them: William Zerkendorf, New York City real estate mogul; Virgil Dardi, president of another management outfit, Blair Holdings Corp., which owns a big Pepsi franchise (BW—Mar.13'48,p32); and Albert F. Milton, who has resigned as executive vice-president of still another management company, Equity Corp., to take over as the new Phoenix's treasurer.

## Medical Coverage

**Insurance company designs its "disaster" policy to take 75% of the worry out of big medical and hospital bills.**

Most people lose some sleep at one time or another wondering how they could pay the bills if someone in their family had a really serious illness.

In personal terms, that kind of sickness would be as disastrous as a big fire would be to a manufacturer. Now the largest U.S. casualty insurance company, Liberty Mutual Insurance Co., of Boston, has announced it is writing medical "disaster" insurance. At least two of the biggest U.S. life insurance companies soon will enter the field.

• **75% Protection**—The new policy protects you when your medical or hospital bills pass a specified amount, say \$300. As an incentive to keep expenses down,

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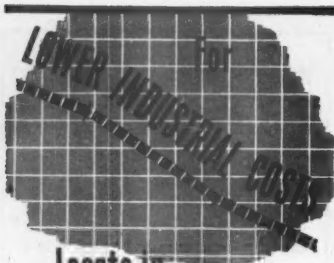
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Without any fanfare, Liberty has been offering this policy since last fall, now has about 7,000 families signed up under group policies. About 500 individuals have also come in under group plans. The company group policy is available all over the U.S., but on an individual basis is sold so far in only 10 eastern states.

• **Upper-Bracket Appeal**—Liberty's experience shows that this type of insurance appeals a lot to people with incomes of more than \$5,000 a year. Only about 10% of those with smaller incomes are interested.

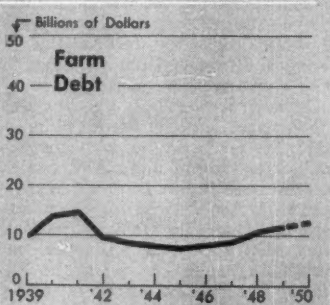
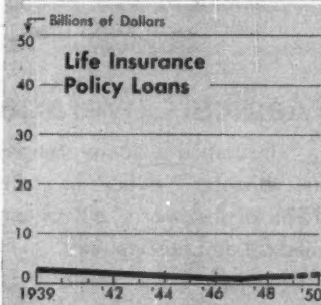
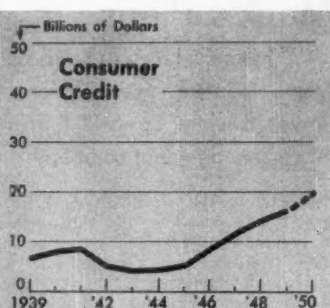
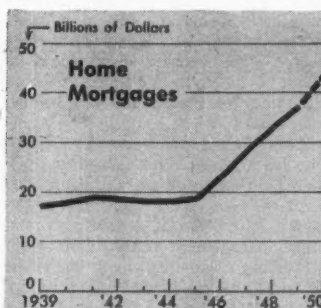
Rates aren't high, however. On a \$300 "deductible" basis, family coverage under a group policy costs \$4.50 a month, individual coverage under a group policy \$2.25. Separate policies cost about \$6.50 for a family, \$2.80 for an individual.

## FINANCE BRIEFS

The Treasury offer to exchange 1½ nine-and-a-half-month notes for its \$10-billion maturities of June 15 and July 1 went over well. About 94% of the maturing paper was exchanged for the new notes, which offer a higher yield than other paper in the same class.

Class I railroads in April had a net income of \$45-million, up \$5-million from last year. But it took a 19.3% rise—\$137-million—in gross revenues to produce the 13.6% increase in net. Reason: today's higher operating costs (BW—May19'51,p124).

A stock splitup—two-for-one—has been O.K.'d by stockholders of Standard Oil Co. (N. J.). It's going into effect soon, will raise company's outstanding shares to 60.5-million.



## Where Consumers Did Their Borrowing

The big buying boom of the postwar years brought with it a big increase in individual debts. The major forms of personal debt increased from \$34.7-billion at the end of 1945 to a record-breaking \$79.5-billion at the close of 1950, according to statistics collected by the Institute of Life Insurance. That's a gain for the five-year period of 129%.

Altogether, these types of personal debt

comprised about 39% of disposable income in 1950—as against 23% in 1945. Home mortgages, for instance, never ran above \$20-billion before 1946. By the end of 1950 they had moved to an estimated \$44-billion. Consumer credit has moved upward even faster. But farm debt and loans on life insurance policies, though they have increased during the last five years, are still below earlier levels.





"But you have to dress for this, dear—"

Whether it's a dance at the country club or an important dinner, you probably growl, like most men, about getting into evening clothes. But later, you feel kinda proud in your "tails" or dinner jacket and white dress shirt.

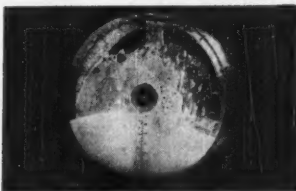
Any white shirt is a good test of a laundry — and of its washing materials. So leading laundries use washing compounds containing Wyandotte Carbose\* (Sodium CMC) — the specialized detergency promoter. In a compound, it also reduces the loss in fabric life.

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Carbose is not limited to detergent use. It has other applications in the textile, paper and paint industries. Whatever your business, if you use chemicals, you'll find it profitable to consult Wyandotte.

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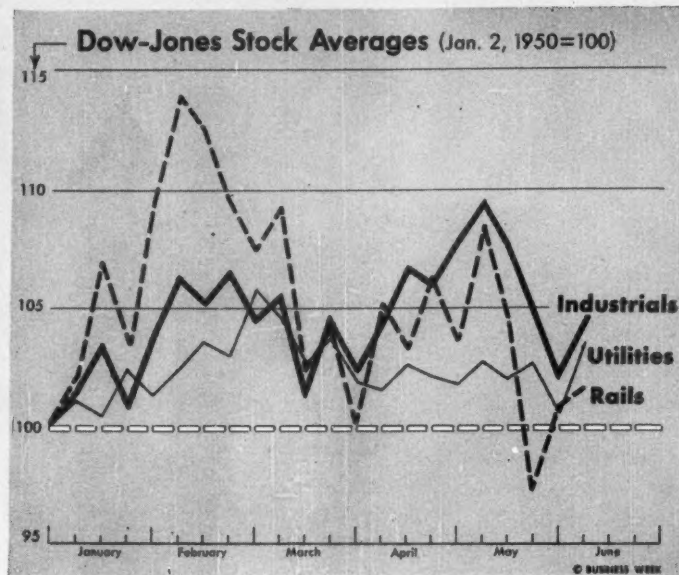
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## THE MARKETS



## What Makes the Zigzags?

Right now it's the debate on how much more inflation is ahead. Since first of year, stock-price averages have been in constant shuffle.

There's an old Wall Street story that somebody once had the temerity to ask the elder J. P. Morgan what he thought the stock market would do next. "Stock prices," answered Morgan, "will continue to fluctuate."

And that's still the truest thing you can say about the market. Take a look, for instance, at the way the three Dow-Jones averages have shifted since the start of the year (chart). The rail average gained much faster than the industrial and utility averages in January and February. That happened in spite of the fact that people were afraid of runaway inflation, and long-term inflation is bad for rail earnings. What fascinated traders then was the rosy earnings prospects of the railroads.

• **Quick Drop**—In the March shakeout, the rails went down fast. And when the market ran into another spell of heavy weather in May, they dropped below their Jan. 2 level.

Since March, the industrial average has outpaced the rails pretty consistently. The industrials have also done better than the Dow-Jones utility average, which as usual has fluctuated a lot less violently than the other two averages. In spite of the steadiness of

the utility stocks, the immediate earnings outlook isn't all bright by any means (page 153).

• **Indecision**—At midweek the market as a whole was well above last month's lows. But whenever prices gain much, they run into profit-taking.

This shows that investors are having trouble making up their minds about what's ahead in the next six or eight months. It's not the earnings outlook that baffles them. It's whether or not we are going to have more inflation.

• **Earnings Go Down**—As far as corporate earnings go, investors know that the trend is down. Price controls, wage boosts, and higher taxes will take care of that. But stocks are selling these days at such conservative price-earnings ratios that a downtrend in earnings—and even some dividend cuts here and there, if not too sharp—needn't necessarily hurt prices.

What interests a lot of potential buyers of stock is this: Will there be another burst of inflation soon? If there is, you'll see a return of the speculative buying needed to keep a bull market lively. And a lot of the gentlemen who traditionally prefer bonds will start shifting again into common stocks as a

hedge against rising prices. But if inflation has been definitely checked, it could be bad news for stock prices.

• **Guns and Butter**—The people who look for some "disinflation" argue that our productive plant is big enough to provide guns—on our present scale of rearmament—along with plenty of butter. They think that inventories are still high enough to prevent shortages of consumer goods for some time yet. And they think that credit inflation is now under control.

Against that, the bulls point out that

deliveries of military goods are just starting really to speed up (BW—Jun. 9'51, p21). They figure that means shortages of consumer goods by this fall. And there always is the possibility that another international crisis could send consumers into a buying panic again. Finally, the bulls argue that defense loans and deficit financing may well inflate credit some more.

Most investors and traders can't decide which forecast is right. They're staying on the sidelines until they can make up their minds.

## Clamor for New Capital Rising

There will be a sharp increase in the sale of new corporate securities this year. Investors may be called on to purchase as much as \$5.3-billion of new stocks, bonds, and notes. In 1950 the figure was only \$3.7-billion.

That's the prediction now of the economics staff of New York's Bankers Trust Co. It seems right on the beam. Thus far this year there has been no slackening in the avid postwar demand by business in general for permanent or temporary new capital. That's despite factors like these:

• SEC's recent estimate that the working capital of all U.S. nonfinancial corporations had hit a record \$75.8-billion on Dec. 31, 1950.

• The high levels of industrial earnings since then.

• The sharp recent rise in the cost of financing.

The reason for the capital expansion? In these inflation days it takes more and more cash to make the corporate mare go—cash for working capital, for plant expansion, and the like. It's not confined to any one segment of business. All the trades are seeking capital; so are their large and small components.

Here's a sampling of financing deals either completed recently or close to consummation. Most of the securities involved have gone directly to the life insurance companies, via private placement (BW—Mar. 3'51, p110).

| Company                            | New Securities<br>(Millions of Dollars) | Use of Proceeds  |
|------------------------------------|---|--|
| Int'l Bus. Machines.....           | *\$50.0 20-year 3½% notes.....          | Expansion, working capital                                   |
| Commercial Credit.....             | \$40.0 10-year notes.....               | \$35.0 refunding, \$5.0 working capital                      |
| General Foods.....                 | \$35.0 25-year debentures.....          | New working capital  |
| National Dairy Products.....       | \$30.0 25-year 3½% deb.....             | New working capital  |
| Chas. Pfizer & Co.....             | \$27.0 preferred and common.....        | Expansion, new working capital                               |
| Colgate-Palmolive-Peet.....        | *\$25.0 20-year 3% notes.....           | General corporate purposes                                   |
| Rheem Mfg.....                     | *\$15.0 long-term notes.....            | \$5.7 for new working capital, rest for refunding, expansion |
| Gen'l American Trans.....          | \$10.0 preferred.....                   | \$14.0 refunding, \$6.0 working capital                      |
| Beaunit Mills.....                 | *\$20.0 20-year 3½% notes.....          | Construction and new working capital                         |
| Minneapolis-Honeywell.....         | *\$15.0 3½% long term notes.....        | \$5.0 preferred  |
| Allied Stores.....                 | \$16.0 convert. preferred.....          | Construction, new working capital                            |
| E. R. Squibb & Sons.....           | *\$15.0 20-year 3½% notes.....          | Working capital  |
| Armour & Co.....                   | \$15.0 common.....                      | Expansion, working capital                                   |
| National Tea.....                  | \$12.0 20-year 3% mtge. bonds.....      | Construction   |
| Brown Shoe.....                    | \$12.0 convert. preferred.....          | Half refunding, half working capital                         |
| Frenhauf Trailer Sales.....        | \$11.0 20-year debentures.....          | One-third refunding, rest working capital                    |
| Sutherland Paper.....              | *\$10.0 12-year debentures.....         | New working capital  |
| Dan River Mills.....               | *\$5.5 3½% long term notes.....         | Refunding and new working capital                            |
| Gould-National Batteries.....      | \$3.4 preferred.....                    |  |
| American Fox Board.....            | *\$9.0 3½% serial notes.....            | New working capital  |
| Continental Can.....               | *\$8.0 12-year 3½% serial notes.....    | \$5.0 refunding, \$3.0 working capital                       |
| Carnation Co.....                  | *\$6.0 long term debentures.....        | Mainly for new working capital                               |
| Monroe Calculating.....            | *\$5.0 15-year 3½% debentures.....      | Working capital  |
| Dewey & Almy Chemical.....         | *\$5.0 25-year 3½% debentures.....      | Information not available                                    |
| International Milling.....         | *\$5.0 long term notes.....             | Expansion program  |
| Mansfield Tire & Rubber.....       | \$4.4 common.....                       | \$3.3 working capital, rest refunding                        |
| Certain-tek Products.....          | *\$3.5 20-year 2½% notes.....           | New working capital  |
| Shoe Corp. of America.....         | *\$3.5 15-year 3½% debentures.....      | New working capital  |
| Norwich Pharmacal.....             | *\$3.0 15-year 3% notes.....            | Construction   |
| Fairchild Camera & Instrument..... | *\$2.5 10-year 4% notes.....            | New working capital  |
| Consolidated Retail Stores.....    | *\$2.0 long term notes.....             | Refunding, new working capital                               |
|                                    | *\$2.0 10-year 4½% notes.....           | Expansion, new working capital                               |
|                                    | *\$1.0 10-year 3½% notes.....           | New working capital  |

\* Disposed of direct to buyer at private sale.



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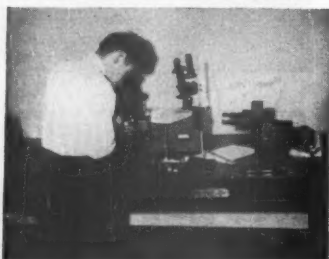


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## DEFENSE BUSINESS

### NPA Slashes Power Producers

Slashes third-quarter allocations of scarce metals because of failure to use up earlier allotments. But cut doesn't mean power expansion program will be curtailed.

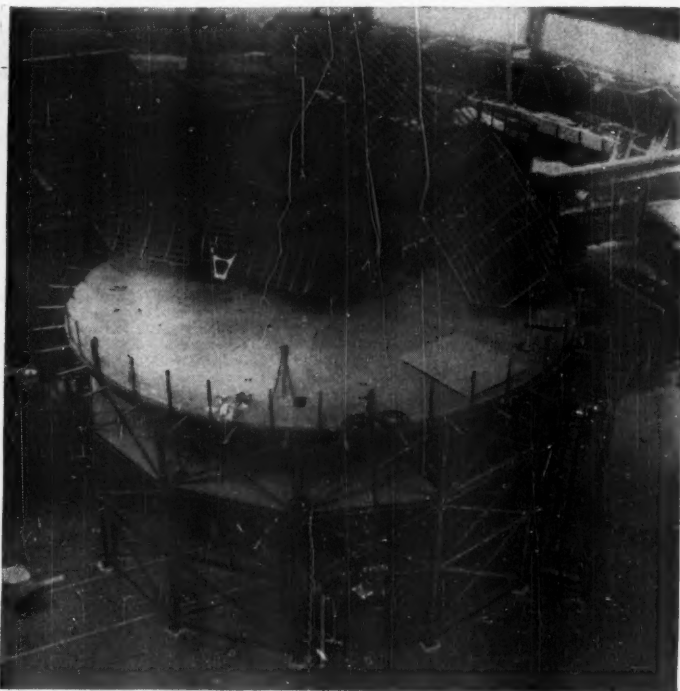
Defense production officials dividing up third-quarter supplies of critical metals among various industries last week were in the position of the teacher who caught a prize pupil in mischief and whipped him in front of the class. Like the teacher, the materials allocators are hoping that the rest of the class gets the point.

The erring pupil was the electric utility industry. The punishment: a lousy slash in materials for power expansion in the third quarter.

• **Nearly Halved**—National Production Authority announced last week that

Interior's Defense Electric Power Administration (DEPA) would get 25-million lb. of aluminum and 75-million lb. of copper to parcel out to the electric utilities—private and public—in the third quarter. This compared with nearly twice as much aluminum—49-million lb.—and 92-million lb. of copper for the current quarter.

• **No Cutback**—This doesn't add up to a decision to cut back power expansion. The drastic reduction in metals was made because defense production experts are convinced that the electric utility program can get along with much



### Radar for the U.S. Warning Net

The tiny figures of workmen on the tower platform give you some idea of the size of the radar installations that the Air Force is setting up. The towers are being built in Goodyear Aircraft Corp.'s huge airdock at

Akron. The towers are completely assembled in the former haven for dirigibles and are then knocked down for shipment to the installation points. Electronic devices for the towers are made by General Electric.



less aluminum and copper than it asks. The cut came after a long look at what has happened during this quarter.

In January DEPA asked the electric utilities to estimate how much aluminum, copper, and steel they would need in the second quarter. The total for aluminum was more than 60-million lb. DEPA cut this to 53.5-million lb. when it went to NPA for an allocation of DO's. NPA cut it to 49-million lb.

The quarter was only a few days old in early April when representatives of the aluminum producers—Alcoa, Reynolds, and Kaiser—came storming into DEPA's offices demanding to know where the utilities' DO's were. Unless the power utilities stepped up their orders, conductor production would have to be cut, they warned.

By mid-May, when the Defense Production Administration's Materials Requirements Committee was setting up the third-quarter quotas, DEPA was pleading with the electric utilities to use their DO's. Final figures aren't in, but it's certain the electric utilities won't use anything approaching 49-million lb. of aluminum this quarter.

• **Copper, Steel**—Copper orders haven't been so slow as aluminum; steel orders are justifying the 90,000-ton-per-month allocation for May and June, which is being continued through the third quarter. But DEPA doesn't know what happened to the aluminum DO's it issued.

Heavy inventories might account for some of the failure to order aluminum, and there were unforeseeable delays in most types of construction. But there's a high suspicion that the industry's conductor estimates were just inflated.

• **Slowness**—Last week in Denver, DEPA's administrator, C. B. McManus, of Southern Co., broke the news on third-quarter metals quotas to private electric company officials at the Edison Electric Institute's annual convention.

"One of the things that has handicapped us in getting sufficient materials for the third quarter," McManus cautiously told EEI, "is the slowness with which utilities applied defense orders in the second quarter. Because these defense orders did not reach the mills as quickly as they might have, the assumption was made in Washington that the utilities did not need all the material they had asked for."

This, he added, "was not true. . . ."

High officials in production planning in Washington disagree. If they're wrong, electric power may get supplemental allocations in the third quarter. For the nation is going to need the record-breaking expansion scheduled for the electric utilities in the next three years—whether the economy is geared to military or peacetime production, or both (page 98).

• **Power Scarce**—Already power supply is plaguing defense production planners.

Secretary of the Interior Oscar L. Chapman has told the aluminum companies that their expansion plans from here on can't include the Northwest's cheap water power (BW—Jun. 2 '51, p. 21). The decision was obvious. A few inches less than normal rainfall or snowfall and some aluminum potlines would have to be shut down on the Columbia River.

In the rest of the nation, the power supply picture is bright only in contrast with the northwest. On the eve of World War II most regions had 15% to 20% reserves, which were rated "normal." Today a region with 5% to 10% reserves is in relatively good shape.

## Pinch in Alloy

**Increase in export of molybdenum to replace tungsten in steelmaking will slash deeper into nondefense uses.**

Molybdenum—the favorite alloying material of steelmakers—has been caught in a materials squeeze play. Mobilizers have ordered a 40% increase in exports of the metal—to come out of the U.S. diet. Purpose is to supply overseas mills with a substitute for the now-blocked-off Chinese tungsten.

The order, which takes effect this month, came just as National Production Authority had finished cutting up the alloys pie for U.S. users. In part, the export stepup is an effort to make up for subpar shipments earlier this year.

• **Who Gets Hurt**—Under NPA's allocation, 35% of available molybdenum was slated to go to civilian users. Compared with the nickel allotment—20% of total supply for nondefense uses—this didn't seem too severe.

Now, however, the clamps have tightened. Because of the export order, the civilian share will be figured on a smaller base. From the number of complaints that have already come in, molybdenum may soon rank with nickel as the shortest of alloying materials.

• **Score Board**—Here's how the alloys stack up on NPA's melt sheet schedules for June:

**Nickel:** 20% of the supply for non-defense use. The 80% for the military and defense-supporting industry isn't so much as they asked for. The military got enough for three-fourth of its orders; defense-supporting industries got half of what they wanted.

**Cobalt:** 25% of available supply for nondefense work.

**Molybdenum:** 35% of the reduced supply for nondefense.

**Columbium:** None for nondefense. Military and the Atomic Energy Commission are the big takers.

Of all the alloy metals, only silicon

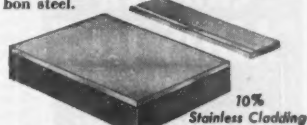
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and manganese—the scavengers—are in plentiful supply. They are used for removing impurities from steel. The alloys that impart special qualities to steel are the ones that are causing the pinch in supplies.

• **England Wants More**—When Richard Stokes, Great Britain's No. 1 raw materials shopper, returned to London recently from a trip to the U.S., he said he had spent most of his time talking about molybdenum.

The U.S. export allocation of 14-million lb. for the second quarter was announced soon afterward. That compared with total shipments of 890,000 lb. in the first three months.

• **U.S. Pushes Production**—The present allocation is considerably more than we exported before Korea, but not so much as shipments per quarter in 1950—a big year. By the end of 1952, a scheduled 25% increase in production will ease the situation, both domestic and foreign. It's the way the quota is falling this month, plus the fact that U.S. users had got adjusted to a larger-than-usual share, that causes the headaches.

No export figures for April and May have been announced, but in March they had fallen to 163,000 lb. If this rate continued into the first two months of the current quarter, the trade doubts whether shipments can be upped enough in June to fill the quota. Nevertheless, U.S. users were told that their allocations for June were reduced because we have to double up on exports. This indicates an effort to ship up to 900,000 lb. abroad—which would set a new record.

## Fish-Tackle Makers

### Try New Bait on NPA

The fishing tackle industry wants a new kind of bait: one that NPA's copper division will take.

If it doesn't find a successful lure in the next 60 days, the industry says its key line of goods—reels—will have to be closed out. Its tribulations are similar to those of other specialty manufacturers who fear their products have been earmarked by NPA as frivolous—and therefore first cousin to the symbolic

The Pictures—Cover by Dick Walters. Acme—19 (bot.); Harris & Ewing—19 (top lt.); Bob Isear—30, 32, 33, 38, 76, 80; Herb Kratochvil—25; Ed Nano—20, 114, 116, 118; Sovfoto—173 (rt.); Wide World—24, 26, 155, 173 (lt.); Dick Walters—19, 22, 23, 129, 148, 149.

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## AGRICULTURAL MARKETING

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3. Completely covers the marketing of agricultural products—how consumers act in buying farm products—the locational and seasonal aspects of farm production—and the marketing system... including agencies, channels, processes, and services. Considers all important recent developments in agricultural marketing—pre-packaging, freezing, air transport, motion and time economy, etc. Analyzes the pricing mechanism and marketing hazards and costs, discusses technological changes in relation to marketing. By Frederick L. Thomson, Exco. Vice-Pres., Commodity Mktg. Corp. 463 pages, 65 illus., \$8.00

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copper ashtray that nobody should make during a period of even partial mobilization.

• **New Try**—Reel makers are feathering a hook for another try.

The new appeal will sidetrack old arguments about the healthful recreation fishing gives 20-million sportsmen. It will not try to make a case for the food value of blue gills brought home to dinner. Such arguments haven't attracted a nibble from the men who staff the copper division. Nonfishermen all, the industry has concluded.

The new lure will be: "Let us make reels, or you'll lose a potentially big producer of precision instruments needed for war."

• **Enough Metal**—The industry argues that it doesn't need more copper or brass—just a change in the rules to allow them to use their base-period allocations for reels. The copper limitation order allows the use of brass for gears, bearings, and spools in reels. But its use for frames, cranks, and screws is prohibited, which the industry maintains is the same thing as blanket prohibition. No other material but brass,

it says, will withstand the wetting fishing reels get.

The industry is making a few reels now from the tag-end of precontrols inventory. This supply will be gone in July or August. The industry has some defense contracts lined up, but most of them don't call for production until next year. And when production starts, most of it will be on little more than a standby basis. A production line tooled for 2,000 gyroscopes a month—for example—may be turning out 250. The industry argues that steady production of its playtime product is necessary if it's going to be on tap for full war production.

• **Last Resort**—Its story has convinced one NPA division—consumer hard goods. This division carried one fruitless appeal on behalf of reels to the copper experts. It is helping the industry brighten up the next bait. If all else fails, the makers of fishing tackle would like to turn the job of enticing the copper division over to a good man with a dry fly—ardent trout fisherman Manly Fleischmann, NPA administrator.

## THESE ITEMS for the military...

|                              | COST<br>this much in<br>APRIL '50 | COST<br>this much in<br>APRIL '51 |
|------------------------------|-----------------------------------|-----------------------------------|
| Ambulance, ¾-Ton             | \$ 3,774.20                       | \$ 4,106.21                       |
| Tire: 7:50x20                | 23.99                             | 36.74                             |
| Fuel Oil, West Coast, Bbl.   | .99                               | 2.18                              |
| Fuel Oil, Caribbean, Bbl.    | 1.70                              | 1.92                              |
| Bailey Bridge                | 37,796.00                         | 65,583.00                         |
| Wire Rope, per foot          | .13                               | .16                               |
| Drawers, White Cotton Shorts | .42                               | .57                               |
| Gunmount, Trailer            | 5,000.00                          | 9,500.00                          |
| Crane, 10-Ton Truck Mounted  | 15,390.00                         | 23,020.00                         |
| Shell, Smoke M313            | 23.89                             | 30.55                             |
| Tachometer                   | 75.90                             | 94.25                             |
| Air Force Height Finder      | 35,880.00                         | 61,844.52                         |
| Parachutes, T-7A             | 198.30                            | 290.00                            |
| Parachutes, Cargo, 100 lb.   | 1,287.00                          | 1,960.01                          |
| Shoes, Low Quarter           | 3.38                              | 7.22                              |
| Boots, Combat Service        | 5.72                              | 11.36                             |
| Space Heater, 50,000 B.T.U.  | 38.00                             | 48.92                             |
| Trousers, Cotton Khaki       | 0.73                              | 0.93                              |
| Shirt, Cotton                | 0.59                              | 0.92                              |

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## How Inflation Eats Up the Military Budget

One out of every \$5-billion appropriated last year for the Defense Department was eaten up by inflation, the Pentagon estimates. In his appeal for extension of the Defense Production Act last week, Defense Secretary Marshall hinted to the Senate Committee

on Banking and Currency that military estimates may have to be increased by 20%. That wouldn't mean any increase in deliveries—just a rise in costs. The figures above are some of those that Marshall cited to back up his point.





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Die-cut adhesive films are especially useful on irregular joints such as the one suggested in the illustration at right center. They're equally convenient and clean to use in a channel as shown at top right. Here, tape of proper width simply is cut to length and laid in place.

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Showing blanks entering machine



Some of the many cartons made on the Palmer Carton Former.

**PACKAGE  
MACHINERY COMPANY**  
CARTON DIVISION  
SPRINGFIELD, MASSACHUSETTS

## CHECKLIST: Defense Regulations

The following listing and condensed description cover all the material and price-control regulations issued by the defense agencies during the preceding week.

Full texts of the materials orders may be obtained from National Production Authority, Washington 25, or from any Dept. of Commerce regional office.

Full texts of the price orders may be had from the Office of Price Stabilization, Washington 25, or from the regional OPS office in your area.

### Materials Orders

**Electric utilities:** Adds steel as a program material for maintenance and expansion of electric power facilities. Establishes quotas of steel, copper, and aluminum for minor requirements by the industry for the third quarter of 1951. M-50 as amended (June 5).

**Tin plate and aluminum:** Limits use of aluminum caps for alcoholic and non-alcoholic beverages to 65% of their base period. M-26, Amend. 1 (June 7).

**Construction:** Delegates authority to eight government agencies to act on applications to commence construction of projects in certain categories under their jurisdictions. Del. 14 (June 7).

**CMP:** Direction 1 authorizes manufacturers of Class B products using small amounts of iron, steel, and aluminum to use allotment symbol SU (small user) without application to NPA. In ordering these materials. Symbol DO-SU will be used in ordering other production materials. Direction 2 authorizes controlled materials producers to apply the rating DO-PM to orders for production materials other than the three basic metals. CMP Reg. 1, Dir. 1 and 2 (June 8).

**Steel:** Increases percentages of iron and steel castings that producers are required to reserve for DO-rated orders during the third quarter. Also sets new lead time of 90 days for alloyed-iron products. M-1 as amended (June 11).

### Pricing Orders

**Jewelry:** Modifies method by which jewelry retailers may prepare their pricing charts; permits them to omit cleansers and powders from pricing charts; and removes the limitation that mark-ups by new retailers must not exceed those at which three-fourths of all sellers operate. CPR 7, Amend. 6, and Suppl. Reg. 2, Amend. 1 (effective June 1).

**Anthrax and seacoal facing:** Ex-

# A MILESTONE IN NATIONAL CITY'S 139 YEAR HISTORY



**ON** June 7, 1951, the capital funds of The National City Bank of New York were increased by \$40,000,000, through the sale of one million new shares.

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empts anthracite, which is used as a filter medium, and seacoal facing, used by foundries in molds for castings, from pricing controls. GOR 12 (effective June 11).

**Paperboard boxes:** Permits manufacturers of paperboard products to establish their base-period prices on any size or shape not manufactured during the base period by adding allowable labor and material increases to their regular pricing formulas. CPR 22 Suppl. Reg. 5 (effective July 2).

**Fats and oil wastes:** Permits armed forces and government agencies to dispose of oil and fat-bearing animal waste materials at competitive prices. CPR 6, Amend. 8 (effective June 11).

**Separate plant or factory:** Permits manufacturers suffering losses in operating separate plants and factories to apply for upward adjustments of their ceiling prices. GOR 10, Amend. 1 (effective June 7).

**Upholstery:** Permits manufacturers to add upholstery felt and sisal pads to the list of items on which cost increases can be figured up to Mar. 15, 1951. CPR 22, Amend. 8 (effective June 8).

**Oriental rugs:** Removes imported oriental rugs from price control. GOR 5, Amend. 1 (effective June 12).

**Sausage:** Permits manufacturers of beef sausage to adjust ceiling prices to reflect cost changes under the wholesale beef ceiling price regulation. GCPR Suppl. Reg. 34 (effective June 12).

**Residual fuel oil:** Establishes ceiling prices for all grades of residual fuel oil at principal eastern seaboard ports. CPR 17, Amend. 2 (effective June 4).

## DEFENSE BUSINESS BRIEFS

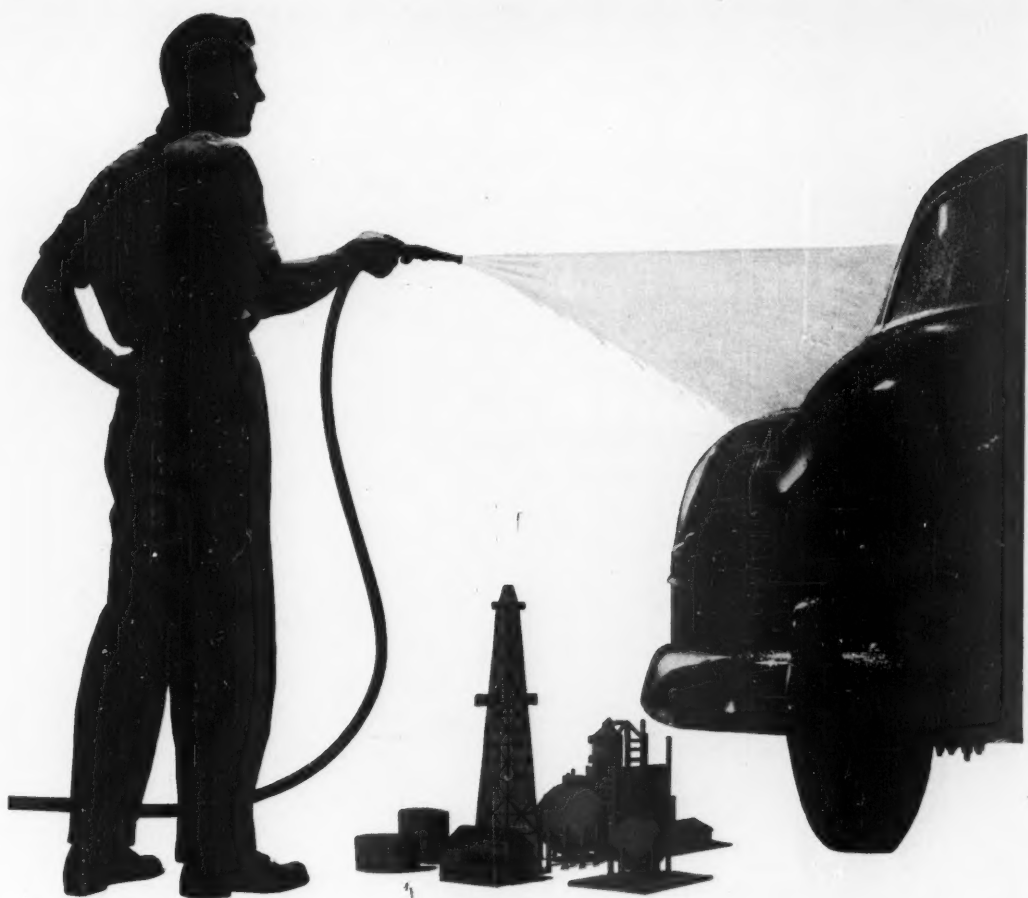
**Copper refiners, scrap dealers, and brokers** will be the only ones to get copper raw materials without special permission, if an order NPA is considering goes through. Raw materials would include scrap, refined copper, and the copper base alloys.

**The sulfur shortage** is forcing cellophane toward controls, NPA warned plastic container makers. Reasons: rising military demands and the 17% of sulfur output earmarked for export.

**Half of polyethylene output** in June will go to military orders. NPA has allocated 34% for essential civilian uses and 16% to the open market. Polyethylene is a plastic used to make food cartons and bags.

**Office machines** may have to be distributed on a priority basis. NPA is studying complaints that military and defense-supporting industries can't get delivery.





## It's beginning to look like new

The gentleman is amazed and no wonder. He's just washed his car with a synthetic detergent made from petroleum. Which is why we've set a miniature oil refinery at his feet. No need to scrub—no need to chamois—a quick once-over with the hose rinses dirt and detergent off immediately. These new detergents make water wetter, cut into dirt, emulsify the grease.

Of course, synthetic detergents are just one of the many petroleum chemicals which help him keep his car on the

go. Anti-freeze is another. They are in his tires and his fan belt. Even the paint he's cleaned so easily may have been made with petroleum chemicals.

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# INTERNATIONAL OUTLOOK

BUSINESS WEEK

JUNE 16, 1951



There's something behind all the rumors of Korean truce talks—despite official denials. The U. S. has already put out feelers to Moscow and Peiping.

Whether the feelers will bring any results is another matter. So far the Russians and Chinese Reds don't seem much interested.

\*But Washington is hoping that sooner or later the Chinese will realize they are licked and start negotiating. (Some U. S. officials even think the Chinese may suddenly pull out of Korea without a word. That would leave the North Koreans—or the Russians—to do the talking.)

The U. N. is drafting a public declaration of its peace aims in Korea.

The declaration will probably follow the line Secretary of State Acheson took before the Senate's MacArthur inquiry: Ending the fighting and freeing South Korea is our goal.

What the State Department hesitates about is the timing. If we look too eager for a truce, that might make the Chinese delay it.

President Truman has political reasons for wanting to end the Korean war.

White House advisers are convinced that the MacArthur hearings have fizzled for the Republicans. They assume that the public today is about evenly divided between Truman and MacArthur. If the fighting stopped, they think, public opinion would shift strongly in favor of Truman.

Defense Secretary Marshall's sudden trip to Korea doesn't figure directly in possible truce talks. But there is a tie-in, even so.

Marshall wanted General Ridgway's views on how far U. N. forces could and should pursue the enemy. This is a question that has the Administration divided.

One group thinks our forces should stop about where they are now. This would help the Chinese to save face, thus make it easier for them to negotiate.

The other group says Ridgway should push up to the narrow waist of North Korea. This would give his forces a better defensive position and the U. S. a better bargaining lever.

The National Security Council has been leaning toward the first theory, but Marshall's findings could change that.

Marshall had two other things to discuss with Ridgway:

(1) The possibility of withdrawing some U. S. troops from Korea soon. The Administration thinks this would have a good effect on U. S. morale, pay off politically.

(2) The problem of stationing U. S. security troops in and around Japan after a Japanese peace treaty is signed.

General Bradley's visit to London produced agreement on Eisenhower's southern command—Italy, the western Mediterranean, and the North African coast opposite Italy and France.

U. S. Admiral Carney will be NATO's commander-in-chief in this area. An Italian general will command the land forces, and an American the air forces, under Carney.

Washington and London, however, are still far apart on the Mediter-

# INTERNATIONAL OUTLOOK (Continued)

**BUSINESS WEEK**  
**JUNE 16, 1951**

anean as a whole. For example, they can't agree on how Greece and Turkey should be fitted into NATO.

Washington this week will get a fill-in on German problems from High Commissioner John J. McCloy.

But McCloy's visit won't bring any sudden solution of the West German arms problem.

As long as there is any chance of a Big Four meeting, Britain and France don't want to discuss German rearmament publicly. And Eisenhower favors caution, too—partly because it will be 18 months anyway until U. S. arms can be spared for German units.

Talks are continuing at the expert level on how to integrate German troops with the NATO forces. But the Germans now say that their smallest unit should be an army corps (two divisions). A while back the French were insisting that the largest German unit should be about 5,000 men.

Anyway you figure them, French election prospects don't look good for the West.

Premier Queuille privately reckoned that the next National Assembly will be split about evenly in six groups. The groups would stack up this way: Communists, 110 members; de Gaullists, 120; Independent Rightists, 100; Radicals, 90; Center Catholics, 90; Socialists, 95.

If Queuille should prove right, his Radical-Catholic-Socialist coalition would have to rely on some of the Independent Rightists to form a new government. But the Rightists would insist on a more conservative economic policy, and that might force the Socialists outside.

Suppose de Gaulle gets enough seats to form a government (with support from the Independent Rightists). But the Communists roll up a popular vote that's almost as big as de Gaulle's.

Then you'd have all the makings of a civil war—especially if the general carries out his threat to crack down on labor unions. That would force a big block of Socialists to team up with the Reds.

Franco seems to be firmly in the saddle in Spain. He's beefing up his security police, frightening the opposition with hints that bloody civil war could return to Spain.

But important changes may be in the wind, nonetheless. After 12 years the Spanish people have discovered they are able to protest. And there is talk in Madrid of cabinet changes and a retreat from the government's policy of extreme economic nationalism.

Foreign businessmen, though, shouldn't expect any early easing of the controls that now make it almost impossible to do business in Spain both profitably and legally.

Clashes between U. S. and European businessmen are showing up this week in Lisbon at the annual meeting of the International Chamber of Commerce. (Theme of the conference: economic development in a period of rearmament.)

American delegates are pushing the idea of freer markets and increased productivity as the only salvation for the free world. Continental businessmen think they can get more stability by keeping their production geared to protected markets.

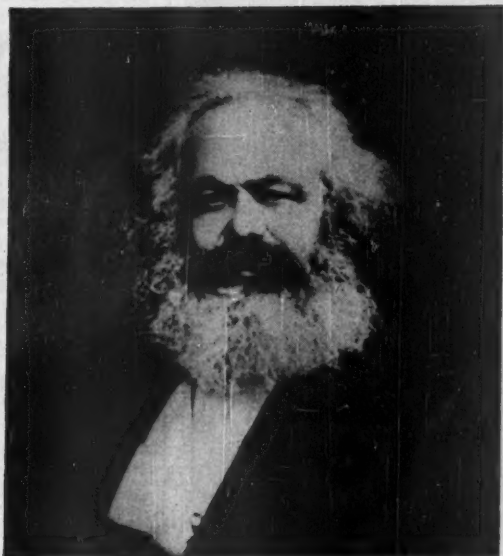


# BUSINESS ABROAD



## STALIN OUT

Tito is trying to do away with every trace of Stalinism in his country.



## MARX IN

But he's turning back to Marxism, trying to mix it with capitalism.

## Yugoslavia Writes a New Ticket

The idea of world revolution has been scrapped. Internally, elastic controls are replacing total economic planning.

Yugoslavia today is working out its answer to a fateful question: What kind of political philosophy can a Communist state devise when it breaks with Moscow and tries to replace Stalin's brand of communism with its own socialism? The answer seems to be a loose mixture of Karl Marx, semi-Socialist Britain, and capitalist America.

Tito's 1948 break with Stalin didn't immediately set off a drive to decommunize Yugoslavia. For a year or two the country stood still politically—a Communist state in fact and name. But today there's no doubt that Tito is trying to rid Yugoslavia of every trace of Stalinism. He's doing it by finding much inspiration in philosophies that are mortal enemies of the Russian dictator. For example, Tito will keep nationalized industry, but he'll give the laws of supply and demand a chance.

• **No World Revolution**—In Yugoslavia the whole idea of Communist world revolution has been tossed aside. The idea is regarded as "reactionary" because it imposes backward Russian institutions on countries with higher economic and social standards.

But the revulsion against Stalinism

as a theory has not been the only reason for the revolution going on in Yugoslavia today; there have been practical reasons, too. For one thing, the Yugoslav leaders realized soon after the break with Moscow that Stalin still aimed at incorporating the Balkan nations into the U.S.S.R. More than that, he planned to destroy the Serbs—the backbone of Tito's regime—as a national group.

• **Immediate Fruits Wanted**—More recently, Tito decided that in a police state nationalism won't provide high production from industry or get government backing from the peasant population. In Yugoslavia the peasants, who make up 70% of the population, were never sold on the future benefits of communism; they want, instead, immediate fruits from their labor.

Yugoslavia's decommunization hinges on changes in three fields: industry, agriculture, and government.

### I. The Economic Plan

According to Stalin, the state economic plan must be the determining factor in economic evolution and in all

economic relations. This was the theory Tito worked on at first.

But now Tito has scrapped the total economic plan and replaced it with an elastic system of government controls. Under them, the government merely divides total national resources among various industries. For example, the textile industry might be told that there are only enough raw materials for it to use 90% of capacity. It's up to industry to decide, on the basis of demand, how much of one product to produce.

• **Decentralized Control**—Industry is still state-owned, but management is no longer highly centralized in the federal government. True, plant directors are appointed from above. But effective management seems to be in the hands of workers' councils and management boards, which are elected by the councils. (In one machine tool plant with 1,300 workers, the workers' council consists of 64 elected members and the management board, 11 members—five workers, two foremen, two engineers, the head of the finance department, and the director.)

The plan is to give the workers' councils the right to dispose of 70% to 80% of any surpluses earned by factories; the councils would decide whether to make capital investments, for instance. Until now the state has

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been taking all surpluses and allocating them for capital investments, etc.

The Tito regime has also scrapped the Soviet idea of getting higher production by big wage differentials and a speedup of the piecework system. Instead, the plan is to raise production by better technical education and the use of more machinery.

## II. The Agriculture Plan

Changes in agriculture have been just as radical as in industry. There's to be no further extension of farm collectivization. What's more, controls have been taken off sales of all agricultural products except grains, fats, and wool. Apart from these items, there's now a free market for food products. Before, all food had to be delivered to the government.

• **No Final Decision**—It's too soon to estimate the effects of the new agricultural policy. No doubt it's a great relief to the 4-million peasants who managed to resist forced collectivization. But the final decision has still to be made. It's not yet clear whether the Soviet-type collective farms will be broken up. Collectivization now covers 27% of the country's arable land.

## III. The Political Plan

In the political field, there's a new attitude toward government bureaucracy. Yugoslavs now laugh at the Soviet fiction that the state will "wither away." Bureaucracy is now labeled the enemy of Socialist growth. And the government is counting on workers' councils and farm cooperatives to take over a big part of the job formerly done by the bureaucrats.

• **Still One Party**—One thing Tito has not dropped is the one-party system. The right to form political parties or associations to oppose the government is still strictly forbidden. But Tito promises to protect the individual by legal reforms and by restricting the arbitrary power of the state police. Foreign observers in Yugoslavia seem to agree that the political climate in 1951 is radically different from two or three years ago—and radically different from the political climate of the satellite nations.

There are other hangovers from communism, of course. Yugoslav workers don't have the right to strike. And that may stymie Tito's desire to get his trade unions admitted to the International Federation of Trade Unions.

• **Soviet Thought Patterns**—There are still other Soviet thought patterns that hang on in Yugoslavia. Government leaders hate to admit that in a backward country you can hold up social progress by giving heavy industry a priority over consumer goods industries. Nevertheless, the government has

dropped some of its ambitious capital goods projects—for example, a locomotive industry with a planned output of 300 engines a year and an automotive industry to make 50,000 cars a year.

## IV. Industrial Progress

But the country is still trying to do more in heavy industry than its supply of skilled labor permits. This is a case where Yugoslav Marxists have rejected Stalin, but are still tied to one of Marx's fallacies. Marx predicted that industrialization would lead to a replacement of skilled by unskilled labor—machines would make skilled labor unnecessary. Yugoslav economists took over this idea uncritically and thought that the labor problem would solve itself as Yugoslavia industrialized. But they have found that expansion of heavy industry has, of course, increased the demand for skilled labor.

• **Some Success**—Still, the Yugoslav government has some industrial successes to its credit. Production of crude steel is up to 420,000 tons. Output of electric power has gone up from 1.1-billion kwh. to 2.2-billion kwh. since 1938. Coal production in 1950 reached 13-million tons as against 6-million tons prewar. An aluminum plant with a capacity of 15-million lb. a year has been completed. But production of consumer goods in general has lagged far behind that of the basic industries.

• **Closer to the West**—The process of decommunization has gone on in Yugoslavia side by side with the development of closer diplomatic and trade relations with the West. American and British stock is high in Yugoslavia because of the U.S. food-relief program and a growing trade with the West.

The U.S. supplied 21% of Yugoslavia's imports in 1950 as against 9% in 1949. Western Europe's share of Yugoslav imports has risen to 63% as trade relations with the Soviet bloc have come to a standstill. The Yugoslavs realize that this switch in trade has been good for them. They get their imports now at world market prices instead of the jacked-up rates Russia and the satellites charged.

What Yugoslavia is waiting for now is a \$200-million loan from the World Bank. Tito wants the money to expand output in both heavy and light industry. Negotiations for this loan have been going on for a year. The big problem seems to be whether the governments of the U.S., Britain, and France will underwrite the Yugoslav trade deficit far enough ahead to make the loan look like a good bet to World Bank officials. Needless to say, the bank is favorably impressed by Tito's decommunization program. It would like to give it a further push by easing Yugoslavia's industrial shortages.

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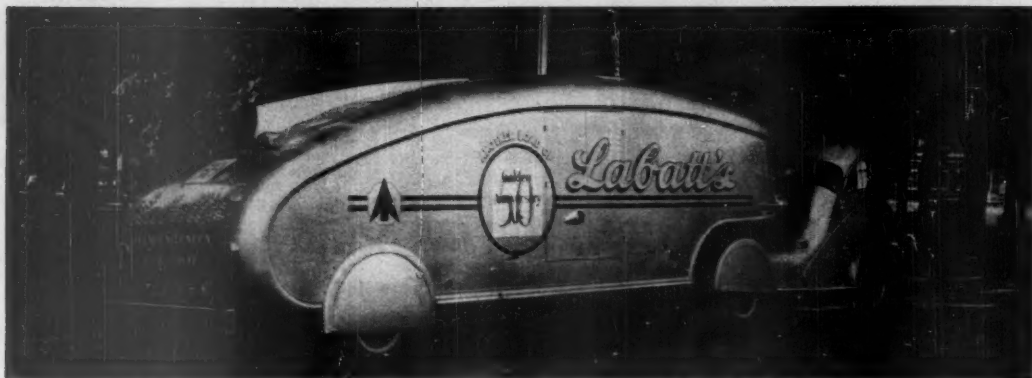
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1000 Ton Danly Underdrive Press shown in operation producing floor panel stampings for Ford automobiles. Bed area of press is 180" by 100". The conveyor feeding the press, part of Ford's "Automation" system for mechanical material handling, is synchronized with the press cycle.



BREWERY TRUCK in red and gold lacks only neon sign to promote Labatt brand. Truck was designed by Count Sakhnoffsky.

## Canada Plugs Liquor—But Not in Ads

The average Canadian will take a nip as well as the next man. But in eight of Canada's 10 provinces (not in Quebec and Newfoundland), he has to decide for himself which brand is savored by the men of distinction—the advertiser can't do it for him. And he never sees himself in a newspaper ad relishing a cooling sip of the beer with the "best" flavor.

Advertising alcoholic beverages in Canada—whether by newspaper, magazine, radio, or street car ads is not easy. It takes a special kind of art. The name

of the advertiser cannot take up more than one-tenth of the total space. And the content of the ad must in no way push the sales of beer or liquor.

For this reason, a Canadian brewer or distiller has to use ingenious forms of institutional advertising—and every conceivable kind of public relations stunt—to induce consumers to demand his particular brand in the provincial stores.

One of the leaders in the gimmick technique is John Labatt, Ltd., of London, Ontario. This brewery (founded in 1832) combines its ad-

vertising with public service. The latest device is the company's Mobile Disaster Service, staffed by employees, which fits in with the Ontario Civil Defense program. Right now, the unit is set up only in the London area. But Labatt may extend it to 15 other industrial centers in Ontario, including Toronto.

Then there's the Labatt highway courtesy service, which got going about 20 years ago. Every Labatt driver is duty-bound to stop and help motorists in distress on Ontario highways—be it a



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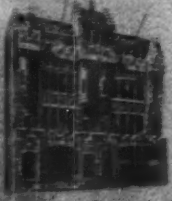
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**DRIVERS** are highway Mr. Fixits.

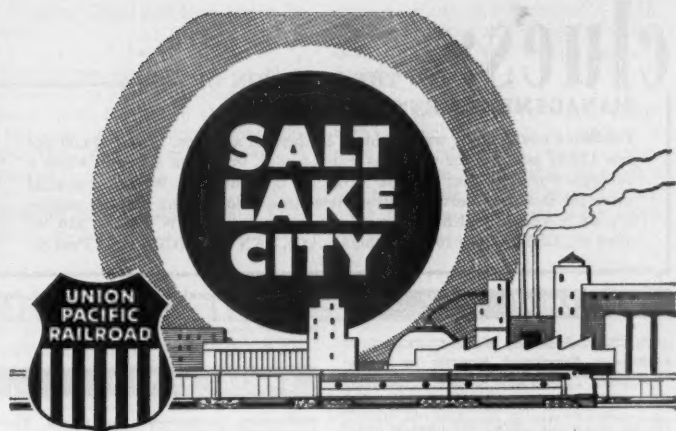
simple tire change or an accident that requires skilled attention. And you can't miss Labatt's streamlined red and gold trucks on highways or city streets.

Labatt uses public-spirited themes in its advertising, too. They plug tourist pleasures in Canada, exhort Canadians to "make them want to come back."

Other Canadian beer and liquor advertisers take a similar tack. Carling's, one of the Canadian Breweries, Ltd., group, directs its ads at conservation of Canada's forests and wildlife. O'Keefe's runs another type of series. And Dow Brewery of Montreal plays up its bravery awards. Seagram's "moderation" line speaks for itself.



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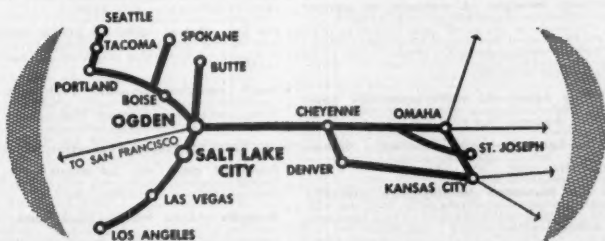
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## Australia Gets Prefab Powerplants

MELBOURNE—Power-short Australia is relying on small, prefabricated steam plants built in the U.S. to spoon-feed its mushrooming industries. Westinghouse Electric Corp. and General Electric Co. have orders to ship 19 of these "packaged" power units to Australia between now and mid-1953.

The plants are complete generating units of relatively small capacity. The whole unit—boiler, turbine, alternator, condenser pumps, heaters, chimney stack, pipes, cables, switchgear, and all accessories—is supplied ready for erection on a simple foundation.

• **Uncertain Supply**—Australia today has little more generating capacity than in 1939, but by overloading it's getting about twice as much power. This means that power supply is inevitably uncertain; power failures, blackouts, and load shedding happen all too frequently in this situation.

In this crisis Australian supply authorities have turned to the American packaged plant. (Big construction projects won't restore normal supply for five to eight years.) The Sydney County Council made a start early this year with an order for four stations of about 6,000 kw. each. Westinghouse is now readying these units for shipment.

Other Westinghouse orders include: eight 10,000-kw. units from the State Electricity Commission of New South Wales (total contract price, \$13-million); one 30,000-kw. plant and four 10,000-kw. units from the State Electricity Commission of Victoria (contract price, \$11-million); one 10,000-kw. station from the City Electric Light Co., Brisbane.

GE has an order from the Brisbane City Council for two 5,000-kw. plants. Contract price is slightly more than \$1.5-million.

## BUSINESS ABROAD BRIEFS

**Foreign television:** Montreal is to get its own station. The Canadian Broadcasting Corp. is building a 283-ft. tower atop Mount Royal. . . . The Netherlands government has decided against subsidies for TV transmitters, which may hold up Philip's plan to put its experimental station on a commercial basis.

**New oil investments** involve Japan and Pakistan. The Japanese Mitsubishi Oil Co. has resumed its tie-up with the Tide Water Associated Oil Corp. of the U.S. Tide Water is sinking about \$1.7-million into Mitsubishi via financial and

## THIS SECTION

is management-men's own classified advertising—use it for fast, efficient, economical action on any business want or need.

technical help. . . . The Pakistan government may put 30-million rupees into shares of foreign oil companies operating in that country. The government ruled in 1950 that such foreign oil interests had to offer 30% of shares issued to Pakistanis. Private buyers haven't come through.

The first rayon plant in Venezuela will go up on a site near Caracas. The builder: Celanese Venezolana, formed

by Celanese Corp. and local textile interests.

A Dutch expansion is planned by Monroe Calculating Machine. It will convert a small assembly plant in Holland into a full-scale manufacturing operation. Production will be exported to 35 countries.

British jet engine makers earned \$2.2-million in royalties and license fees

from American manufacturers in 1950. Pratt & Whitney and Wright Aeronautical Corp. both have bought rights to British jets.

Moscow has offered to supply Egypt with all the newsprint it wants at a price lower than any other supplier. The Egyptians have turned down offers like this before, but the present newsprint shortage is making them think twice.

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# Wilson Needs More Than Critics Today

Six months ago Charles E. Wilson cleaned out his desk at General Electric and headed for Washington to take charge of defense mobilization. What he found didn't buck him up. The military requirements program hadn't been put together. Contract letting was piddling along. The fight on inflation was going badly. Personal relations among some top mobilization officials were poisonous.

Wilson changed the tone and tempo of the defense program pronto. He prodded the military into setting down its needs. He stepped up the letting of contracts to a \$5-billion-a-month clip. He ended the talk about price and wage controls and invoked them. He whipped into shape a blueprint for expanded production to cover military and civilian needs by 1953.

These six months have not always been sweetness and light for Wilson. He has had his troubles and his grip has sometimes slipped a little. Certainly, he has not had the kind of support—in or outside the government—that he had a right to expect.

## Undercutting Tactics

Take the most flagrant case. Wilson had not been in the saddle long before the leaders of organized labor struck against a decision of the Wage Stabilization Board. Rather than back him up, the White House undercut him in a series of cunning maneuvers that gave the labor leaders about what they wanted.

Now Wilson is facing a threat of another sort. Groups all over the country, including leading business organizations, are putting up a strong fight to curtail or abolish the congressional grant of power under which he is working—the Defense Production Act of 1950. The act expires June 30—in just two weeks. Right now the Senate Banking & Currency Committee is bogged down with the protests of 60-some organizations against some or all of the act. The jam-up is so bad that Congress may just extend the present law a little while and see what happens. That will leave Wilson without a firm base of operation.

Now, it is true that some of the changes in the act proposed by the President are highly objectionable and never should have been offered. A prize one gives price boss DiSalle power to license business as an enforcement measure. *BUSINESS WEEK* rejects that amendment and has serious reservations about some others. But it is convinced that the drive to scuttle the act must be slowed down and stopped.

Recent events have given Congress some reason to listen to arguments that the law is no longer needed. Commodity markets have been weaker. Crop reports are better than they were three to six months ago. Price wars in the wake of the Supreme Court decision crippling the fair trade laws have attracted hopeful attention. Large inventories and tighter money are cited as proof that the inflation threat is waning. Renewal of the act is

further endangered by the obvious unwillingness of large groups of the population to go along with controls affecting them. The refusal of the Administration to use controls vigorously in politically sensitive areas, notably labor and agriculture, has not helped.

## Renewal Vital

But the plain fact is that Wilson will be badly hamstrung if he doesn't get a renewal of his basic power to allocate materials, expand production, control wages and prices, and regulate credit. The mobilization is not over the hump. Nor is the inflation threat gone. A period of heavy pressure lies ahead as arms spending rises to its peak. We must keep girded up for another year or two.

Mistakes have been made in the mobilization effort. *BUSINESS WEEK* has pointed them out from time to time and will continue to do so. But of one thing we are perfectly sure: Our best bet is to give Charles Wilson the powers he really needs to get us over the hump. He detests the controls he must use as much as we do. We can count on him to use them sparingly and junk them as soon as he can. But we can't expect him to carry out his giant task without solid support. It's high time some sections of American business think that over.

## Empire Builders

Once in a while a clever bureaucrat tries to bypass the Federal budget system, which provides that agencies must return to Congress every year to report on work done before they get the next year's funds. The latest attempt is a neat financial device called a "continuing fund." Congress has now caught up with it, but the story shows how bureaucracy can burgeon if unchecked.

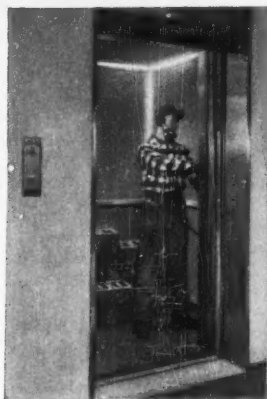
The Southwestern Power Administration is a power marketing agency set up under the Dept. of the Interior. It got Congress to approve a plan whereby \$300,000 was deposited with the Treasury to be drawn on for emergencies. The fund's balance was to be kept constant no matter how much was taken out.

Given the uncertainties faced by the SPA, the scheme looked useful. It no doubt was innocent. But then the empire builders got to work. In a complicated series of leasing deals its administrators committed Southwestern to \$66-million of expenditures out of the \$300,000 "continuing fund" before Congress caught on.

Private power companies protested. This time Congress listened—before the money was actually spent. The ambitions of Southwestern are now in the courts.

Meanwhile, a brother agency in the Interior Dept., the Southeastern Power Administration, asked for the same device. Instead, the House Appropriations Committee cut its requested "continuing fund" down to \$50,000 and forbade its use in the leasing pattern that Southwestern ballooned. The Washington empire builders will have to rig a new scheme.





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## Everybody wins

Since everybody likes food, everybody wins when food is at its tasty, nourishing best. And, for food to be at its best involves many things—planting, processing, packaging, sales. Also, it involves chemistry.

Beginning with the growing of foods, Monsanto chemicals are used to insure higher quality and better yields of grains, fruits, vegetables. Herbicidal chemicals, too, contribute much—they check or destroy weeds, brush, undergrowth—clear more acreage, promote more bountiful crops.

In the field of dairying, many products are improved by Monsanto. Processed cheese, for example, is made with phosphates which act as emulsifiers, making cheese smooth. Food wrappers, containing Monsanto plasticizers, offer protection against contamination...Jellies and jams are preserved with Monsanto sodium benzoate—bread is enriched with Monsanto mineral supple-

ments...Sanitation in food plants is promoted by the use of Monsanto phosphates and detergents in cleaning compounds.

Monsanto phosphate leavening agents assure uniformity in self-rising flours and prepared flour mixes. They also contribute added nourishment.

Tempting taste and inviting fragrance are imparted to foods by Monsanto—for instance, the richer vanilla flavor of ice cream and icing. Saccharin, with no food value whatever, is a valuable dietary stand-by whenever the use of sugar is limited or ruled out entirely.

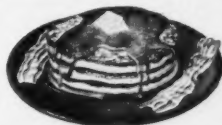
These are just a few of the numerous ways in which chemistry helps everybody win—with foods that are acknowledged the best and most nourishing in the world... Monsanto Chemical Company, 1700 South Second Street, St. Louis 4, Missouri. In Canada: Monsanto (Canada) Limited, Montreal and Vancouver.

### To manufacturers of foods and food products

Of the many chemicals and plastics supplied by Monsanto to the food industry—from growing, through processing and sales—the following are typical of the ways chemistry helps everybody win.



Fruits, vegetables, grains are improved both in quality and quantity through proper and timely application of insecticides and herbicides containing Monsanto agricultural chemicals. Prominent among these are Niran\* (Monsanto's parathion), Nifos\*-T, 2,4-D, 2,4,5-T, DDT.



Pancakes, doughnuts, muffins made of prepared mixes containing Monsanto acid leavening phosphates are wonderfully textured, light, tender, appetizing. Also, they are more uniform throughout, since the last batch of the mix retains the same good qualities as the first.



Ice cream, cake, confections derive much of their appealing taste from Monsanto flavor principles, such as Ethavan,\* used by extract manufacturers. Vanillin and coumarin are other Monsanto flavor principles—so is methyl salicylate, with its wintergreen flavor... Fluffier, lighter cakes result when cake flours contain Monsanto phosphates.



**Get more information...** If you are interested in the production of food, you are invited to contact Monsanto for further information on the following:

☐ Saccharin, food sweetener... ☐ Ethavan... ☐ Vanillin... ☐ Phosphates for foods... ☐ Plastics for packaging... ☐ Santomerse\* No. 1 for compounding detergents... ☐ Niran, ☐ Nifos-T for insecticidal formulations... ☐ Santobane\* (DDT) for corn-borer control formulations... ☐ 2,4-D, ☐ 2,4,5-T for weed-control formulations.

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